PERSPECTIVES ON THE 1000 ISLANDS REGION

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PERSPECTIVES ON THE 1000 ISLANDS REGION

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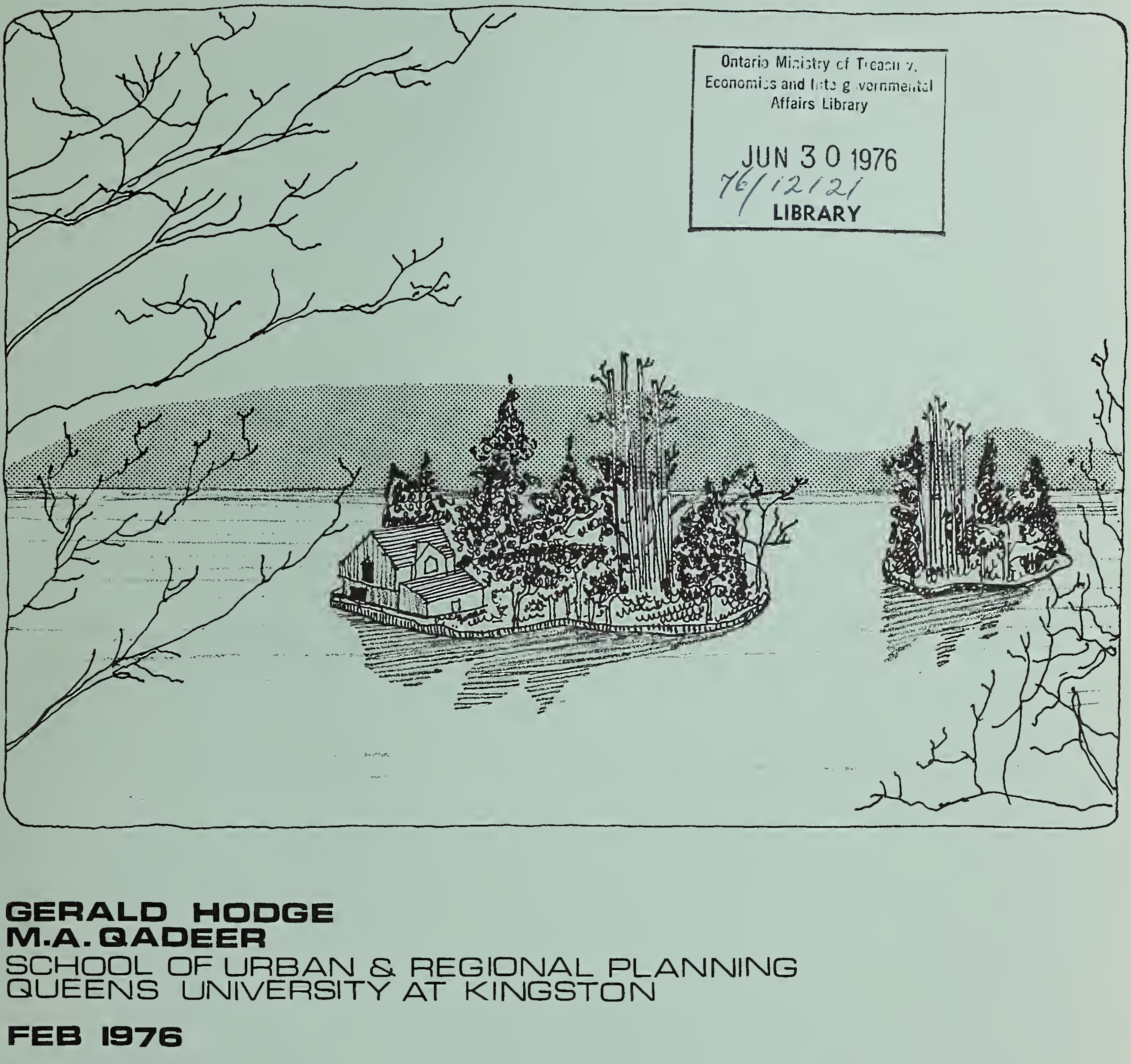

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FEB 1976

A REPORT TO THE REGIONAL PLANNING BRANCH OF ONTARIO MINISTRY OF TREASURY ECONOMICS AND INTERGOVERNMENTAL AFFAIRS

FOREWORD

We are indebted to many people who helped in a variety of ways to bring this report to fruition. Of first importance are those people of the Thousand Island Region who gave so generously of their time to interviews and in finding information. Then there are two research assistants--Carman Fillmore, Muhammed Arif--who gathered and reconciled the data. Lastly are those who helped in fashioning the final form of the report, namely, Kathy Doyle, Pat Hodge, and Brijesh Mathur. None of these invaluable people are, of course, responsible for the errors of omission and commission. That responsibility is solely ours. May we also thank the Ontario, Regional Planning Branch for their support, indulgence, and patience.

G.H.
M.A.Q.

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INTRODUCTION TO THE REGION

INTRODUCTION

The Thousand Island Region is an area of unique physical features. As the name suggests, it has 1,697 islands concentrated in a relatively short stretch (about 50 miles) of the St. Lawrence River. The river itself is the main outlet for waters of the Great Lakes and, thus, is a major maritime route connecting the Atlantic Ocean with interior regions of Canada and the United States.

The deep currents of the river swirling around islands form large pools and bays where fishing, sailing, and viewing become the prime activities. The Region lies on the border of the United States and Canada, drawing tourists from both countries. Apart from tourism which is a prominent economic activity, the Region has numerous industrial establishments, particularly in the old towns of Gananoque and Brockville, and a residual farming sector. These factors blend together in the area and it has been long regarded as a region.

The Region also shares some common problems. First, it partakes of the 'Eastern Ontario Syndrome' suffering from lagging local incomes and production, continual out-migrating populations and relative stagnation of economic and social development. These conditions weigh heavy on the resident population, despite the infusion of income from tourism in localities along the river. Second, since the land is the primary resource of the region, its appropriate use has become a matter of public concern. There are conflicting demands from tourism and recreational uses versus public need for open spaces and preservation of public access to the waterfront. Third, tourism may have many economic blessings, but it also brings numerous problems to the scene. It has a 'boom-and-bust' rhythm seasonally. In summer, literally millions of tourists visit the area providing jobs and incomes for the residents. These economic gains are not without social costs, e.g., crowding of public facilities, overuse of land and water resources, etc. The 'winter' slack turns parts of the area into 'ghost towns'. In many such places, virtually every establishment and house is boarded up.

These effects of tourism have raised questions about the advisability of staking the economic base of the Region on this activity. Apart from these broad issues, problems of environmental degradation, water pollution, traffic congestion, and conflicting uses of land and water, etc., are beginning to make an impression upon the public consciousness. The Thousand Island Region, as a whole, is affected by these issues. This uniformity of functions and problems is the basis for assuring that the Thousand Island area is a region worthy of a singular study.

PURPOSE OF THE STUDY

This is an exploratory study. Its primary objective is to examine the existing trends in selected sectors of the Region. By juxtaposing the findings about the existing conditions with the public policy norms, we hope to identify issues and outline policy alternatives for the future development of the Region. Taking the three main sectors of concern, namely, population, land resources, and tourism as points of departure, the study will attempt to reveal prevailing trends in each of these sectors and identify crucial points for public intervention. It is a planning study in the sense that it views regional problems in the given institutional setting and proceeds inductively from 'existing conditions' to the desired alternatives.

The questions posed for this study are:

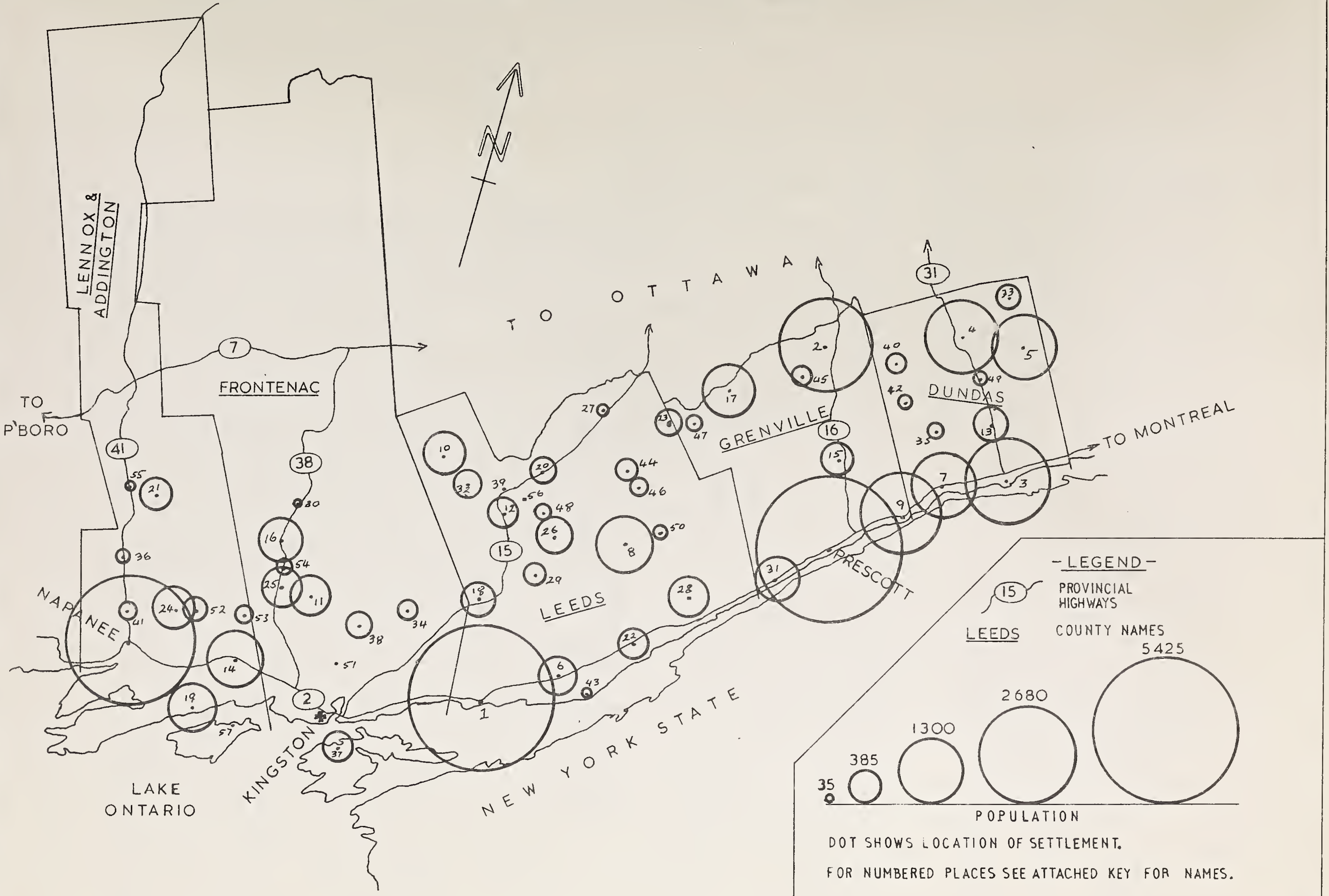
> What are the population trends in the Region and how have they come about?
>
> How does the land market operate, and what are the implications from the public interest point of view regarding the emerging patterns of land uses?
>
> How does tourism affect the local economy, particularly in a town, and what are the income and employment effects of the tourist trade?

These three questions were formulated in order to focus on a few of the significant aspects of the regional structure - obviously there are other issues which could have been pursued, but the limitations of resources (both money and time) necessitated this choice. To grasp the functioning of these three sectors, some background information about the settlement pattern, the clustering of activities, and administrative and political setting has been collected and analyzed. The analysis of these data will be presented in the present chapter. The following three chapters present the analysis and findings bearing on each of the above three questions while the fifth chapter highlights policy options and issues for public discussion.

TABLE 1.1: URBAN/COMMERCIAL STRUCTURE OF THE GREATER THOUSAND ISLAND REGION, ONTARIO, 1973

Centre	No. of Comm./Service Activities	Population 1971
Kingston	over 125	59,045
Brockville	over 125	19,765
Gananoque	117	5,212
Prescott	115	5,165
Napanee Level 6	121	4,638
Kemptville Level 5	83	2,413
Morrisburg Level 4	59	2,055
Winchester	57	1,575
Chesterville Level 4	36	1,272
Lansdowne Level 3	35	520
Iroquois	33	1,224
Athens	29	1,071
Cardinal	29	1,865
Westport	29	601
Sydenham	24	556
Elgin	24	322
Williamsburg	23	398
Odessa	21	1,021
Spencerville	21	386
Verona	20	689
Merrickville	19	930
Seeleys Bay	17	406
Bath Level 3	16	810
Portland Level 2	15	253
Tamworth	14	375
Mallorytown	14	347
Jasper	13	275
Newburgh	11	620
Harrowsmith	11	550
Delta	11	465
Lombardy	11	77
Lyn	10	556
Lyndhurst	10	186
Godfrey	9	34
Maitland	8	670
Newboro	8	296
Moorewood	8	214
Battersea	7	181
Brinston	7	119
Roblin	7	92
Wolfe Island	6	335
Inverary Level 2	6	290
Mtn. Grove Level 1	5	172
Selby	5	154
Hallville	5	83
Rockport	5	55
Toledo	4	179
Oxford Mills	4	175
Frankville	4	143
Easton's Corners	4	119
Phillipsville	4	115
Winchester Springs	4	102
Addison	4	89
Camden East	3	234
Wilton	3	133
Hartington	3	109
Erinsville	3	54

Source: Dun and Bradstreet, Directory, 1973.



DOT SHOWS LOCATION OF SETTLEMENT.

FOR NUMBERED PLACES SEE ATTACHED KEY FOR NAMES.

population distribution 1971

1

and service centre of the southern half of Eastern Ontario. On the other end of the hierarchy are places like Wilton, Erinsville, etc., which average only three establishments and a population of only about 130. In between, there is a wide range of centres offering second and third order functions and supporting populations of a few hundreds or a few thousands. There is an observable hierarchy in the distribution of population and activities in the Region indicating a systematic interlinking of functions.

By plotting activities and population on Figures 1 and 2, we get a picture of their geographic distribution. Parenthetically, it must be pointed out that the maps do not show Kingston and Brockville cities in proportionate circles. Figure 1 shows the distribution of population clusters and Figure 2 presents similar information about commercial and service activities. Comparing the two maps, we can make the following observations about the settlement pattern:

(a) There is a marked east-west orientation in the distribution of major centres of activities and populations. The lakeshore corridor along Highways 2 and 401 is the axis of higher order centres: Napanee, Kingston, Gananoque, Brockville and Prescott. These centres have dominated the Region for a long time. Spurred by the potential advantages of access to water borne transportation, these centres became industrial focal points in the late nineteenth century. Once a set of higher order functions was firmly established in these places, they acquired an infrastructure and institutional characteristics which have sustained their higher status, even when their industrial development declined. In recent times, the waterfront has again proved to be a boon to these places by providing a natural base for expanding recreational and tourist activities.

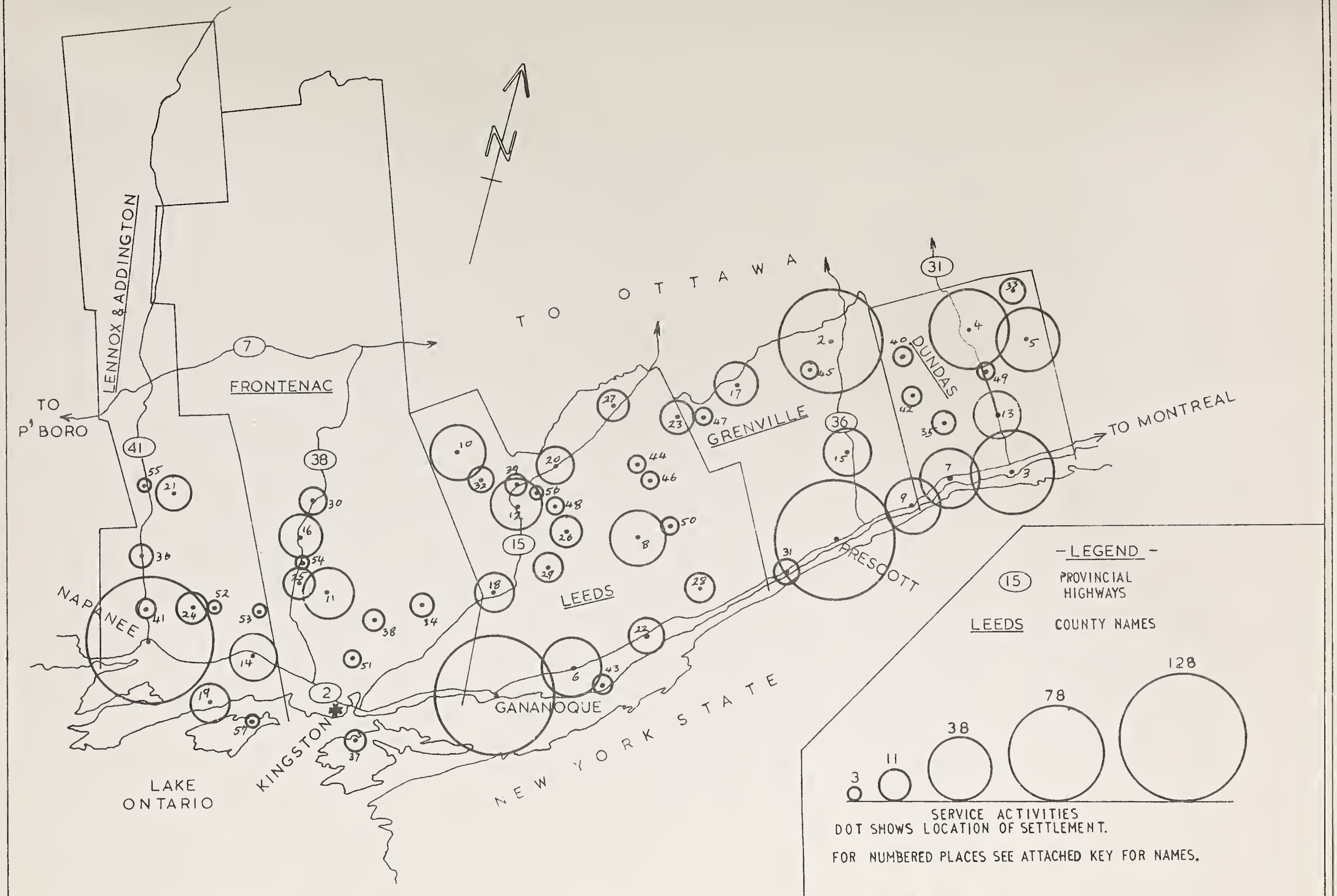
(b) North-south development is relatively weak. Northern portions of counties lack major centres in the 5,000 population class and the existing places fall near the lower end of the 500-1,000 population class, e.g., Tamworth, Verona, Athens, etc. Furthermore, these centres are located along main north-south highways connecting higher order centres on the lakefront with the hinterland. The flow of activities and population from the hinterland is directed towards the shoreline communities. There is no second tier of east-west centres.

(c) If we lay the population map over the commercial map, the correspondence in the two maps is nearly complete. The correlation (r = +0.97) between the number of activities and population size is nearly perfect for this region.

TABLE 1.2: RELATION BETWEEN POPULATION SIZE AND COMMERCIAL SIZE FOR CENTRES IN THE THOUSAND ISLAND REGION, ONTARIO, 1975

No. of Activities	Mean Population	No. of Centres	Level
Less than 5	128	15	1
6 - 15	270	20	2
16 - 35	771	14	3
36 - 60	1,627	3	4
61 - 100	2,412	1	5
101 - 125	4,914	2	6
More than 125	39,400	2	7

The settlement pattern of the Region shows a regular hierarchy of centres incorporating proportionate activities and populations. Of course, this hierarchy is only a part of a



distribution of commercial activities 1973 2

larger system extending over Eastern Ontario, including Ottawa and its satellites, to the north. In any case, what we have observed (five county regions) seems to be a relatively self-contained sub-system centring on the lakefront's east-west axis with offshoots running north-south linking the functions of the hinterland's small centres with the axis.

To obtain an overall view of the hierarchical order in the regional settlement pattern, centres have been grouped in seven classes according to number of commercial activities and population which are mutually correlated attributes.

The activity class intervals in Table 1.2 have been set at 'break points' in the distribution of activities. Whatever the validity of this procedure, it serves the purpose of separating commercial activity and population data into a few comprehensible categories and by doing so, it reveals seven levels of centres and activities. The lowest (first) level comprises places such as Wilton, Erinsville, etc., which are inland hamlets. Such places usually have a gas station, a food store and/or a general merchandise store. At the second level are services such as automotive and miscellaneous repair shops, restaurants, and occasionally a bank or a lodging place in addition to those services found at the first level. These are villages averaging 200-300 population surrounded by countryside; Battersea, Delta, Harrowsmith, Lyn, and Newboro are examples of the second level centres. With the exception of Mallorytown, all these centres are situated in the hinterland and not along lakefront. The third level of centres includes places like Bath, Seeleys Bay, Verona, Athens, and Lansdowne which offer services such as furniture, amusements, recreation, and wholesale durables in addition to banking, restaurants, automotive repairs, and servicing, etc., found in lower level centres. At this level, the lakeshore communities also begin to appear in the hierarchy. The next higher level has only three centres, namely, Chesterville, Winchester and Morrisburg. At this level, public and personal service establishments make their appearance. The fifth level is the unique case of Kemptville which lies midway between Prescott and Ottawa and serves as a regional sub-centre. The next two levels of centre consist of Napanee, Gananoque and Prescott in one class and Brockville and Kingston in the highest class.

All these centres are situated along the lake and riverfront. The hierarchy is top heavy which is a tendency manifest in present day automobile-oriented, centralized regions. We have examined the data for only the current time period, yet it probably would not be correct to say that many older inland centres have been stagnating with increasing concentration of activities in higher level centres like Prescott, Brockville, and Kingston. Incidentally this analysis appears to confirm our choice of regional boundaries. The settlement pattern clearly dovetails into the lakefront centres and there is a visible tilt towards concentration of activities in a few centres. The observed hierarchy suggests a fairly self-contained system of centres.

ADMINISTRATIVE AND POLITICAL SETTING

The Thousand Island Region, as it now stands, with its pattern of activities, configuration of facilities, and distribution of population has been influenced by the administrative and political setting of the area. Four levels of government and a host of special purpose bodies affect the decisions of private households and firms (and other public agencies) in their use of land and other regional resources. In the five-county study

Region the number and distribution of government units are given below:

Local Governments		62
Cities	2	
Towns	4	
Villages	11	
Townships	45	
County Governments		4
Province of Ontario		1
Government of Canada		1
Special Purpose Bodies		6
St. Lawrence Parks Comm.	1	
Thousand Island Bridge Auth.	1	
Conservation Authorities	3	
St. Lawrence Seaway Corp.	1	
		74

Within this large array of public bodies, several are particularly important to the development of the Region. The St. Lawrence Parks Commission of Ontario plays a significant role in land use. As well as operating several parks and tourist attractions in the area, it controls land development along the twenty-five mile length of the Thousand Island Parkway. Parks Canada, of the federal government, operates the St. Lawrence Island National Park. This strategically-located set of island and mainland sites is proposed to be substantially expanded in the near future. While the Region has its own inherent advantages, the form and pace of development is influenced by this multi-faceted government setting to a significant degree. Some agencies actively encourage development; others play a protective watchdog role.

2

GERALD HODGE

STRUCTURE & GROWTH OF POPULATION

REGIONAL POPULATION IN A LARGER PERSPECTIVE

Looking at Population Change

It is a perennially interesting question to wonder why regional populations grow at different rates. Is it because of the availability of jobs? Is it due to cultural differences affecting birth rates? The answer can be with either of these reasons or with many others, singly or combined.

Sheer numbers of people in a region, like the Thousand Island Region, will affect the volume of demand for local products as well as the ability to provide enough manpower to staff the factories, tourist establishments, or stores. But numbers alone will not tell if there are enough people of working age or with necessary skills, for example. Moreover, population numbers or composition seldom, if ever, remain constant. Births and deaths continually change the nature of the resident population. Then there is the movement of people leaving to go to other regions or newcomers choosing the Thousand Island Region as a place to reside.

Population change in this region is determined, therefore, by (1) the capability of the resident population to reproduce itself and expand; and (2) the relative attractiveness of the region to hold its residents and to gain others. Both factors are always at work and the importance of each can change with time. Population in the Thousand Island Region has been analyzed with a view to examining the role of each over the period 1951-1971.

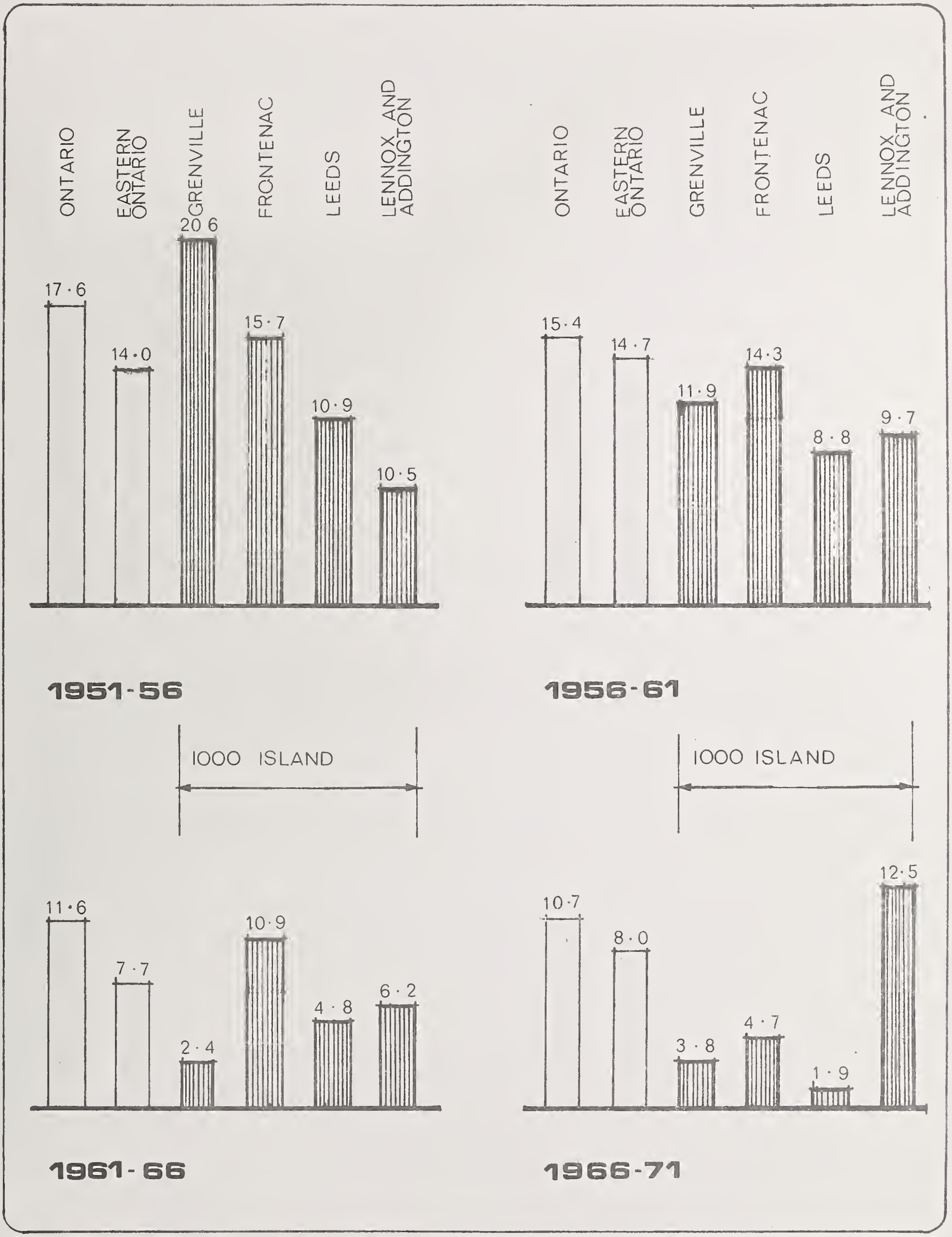
The analysis proceeds through, first, a look at population in the Thousand Island Region compared to the rest of the Province and, in particular, compared to Eastern Ontario. Then, the age structure of the population is examined along with migration to determine the dominant factor in the Region's population growth in the past. An appraisal of projections of the Region's future population complete this report.

Population Change in the Region and Province

The four counties of Lennox and Addington, Frontenac, Leeds, and Grenville have been taken as comprising the Greater Thousand Island Region in this analysis of population growth. Their combined population in 1971 was just over 204,000 people. This was more than 60,000 above the figure of twenty years ago, or an increase of forty-four percent.

The Thousand Island Region accounted for nearly twenty percent of the total population of Eastern Ontario in 1971. The proportion is down slightly in twenty years. After the Ottawa area, the Thousand Island Region was the second fastest growing area of Eastern Ontario since 1951. However, just as with the Province, the pace of this growth has slackened in Eastern Ontario at large and in the Thousand Island Region. But, whereas the Province and Eastern Ontario are still growing at sixty percent of their earlier rate, the Thousand Island Region counties combined are growing at only thirty percent of their earlier rate (see Table 2.1 and Figure 3).

Both Leeds and Grenville counties have grown at less than one percent per year over the past decade. Frontenac County's rate slowed appreciably in the past five years. Only Lennox and Addington County is growing faster than its pace of two decades



COMPARATIVE RATES OF POPULATION CHANGE FOR ONTARIO, EASTERN ONTARIO, AND 1000 ISLAND REGION COUNTIES, 1951-71

3

TABLE 2.1: POPULATION CHANGE IN ONTARIO, EASTERN ONTARIO AND THOUSAND ISLAND REGION COUNTIES, 1951 - 1971

Population in 000's	1951 Pop.	1956 Pop.	% Change	1961 Pop.	% Change	1966 Pop.	% Change	1971 Pop.	% Change
Province of Ontario	4,597.5	5,505.9	17.6	6,236.1	15.4	6,960.9	11.6	7,703.1	10.7
Eastern Ontario	704.2	802.9	14.0	920.8	14.7	991.6	7.7	1,070.9	8.0
Frontenac	66.1	76.5	15.8	87.5	14.4	97.1	11.0	101.7	4.7
Grenville	17.0	20.6	20.6	22.9	11.2	23.4	2.5	24.3	3.8
Leeds	38.8	43.1	10.9	46.9	8.9	49.1	4.8	50.1	2.0
Lennox and Addington	19.5	21.6	10.6	23.7	9.8	25.2	6.3	28.4	12.5
Thousand Island Counties	141.4	161.8	14.4	181.0	11.8	194.8	7.6	204.5	5.9
Kingston and Kingston Twp.	47.1	55.4	17.6	63.9	15.3	72.0	12.6	76.4	6.1
Ottawa-Carleton	246.4	387.4	16.6	358.4	24.8	413.7	15.4	471.9	14.1

Source: Census of Canada.

ago. A large portion of the latter growth is due to suburbanization of Kingston's population. Similarly, growth in the larger centres of the other counties has contributed to most of their increase. And it is the same through much of Eastern Ontario. Ottawa-Carleton added over sixty percent of the population increase of the Region from 1951-71. Smaller centres and rural areas grew little in this period. Some even declined.

Thus, the Thousand Island Region has not grown as fast over the past two decades as the rest of the Province and, as the rate of provincial growth has slowed, the Region has slowed even faster. The Region has experienced population growth tendencies similar to that of the rest of small-town and rural Eastern Ontario. Even the two largest centres of the Region, Kingston and Brockville, have grown appreciably slower than the metropolitan Ottawa area.

PATTERN OF AGE STRUCTURE IN THE REGION

Paralleling the declining rate of population growth in the Thousand Island Region is a general 'aging' of the population. That is, proportionately less young people (under 14 years) and, often, proportionately more older people (over 50 years) comprise the Region's population. While this tendency is also occuring in the rest of the province as well, it is a more pronounced trend in the Thousand Island Region.

Table 2.2 below, uses a simple indicator of 'Average Age' to illustrate the aging of the Region's population since 1961.

TABLE 2.2: 'Average Age' of Population for Ontario, Eastern Ontario and the Thousand Island Region, 1961-1971

	Average Age in Years		
	1961	1966	1971
Ontario	29.89	29.83	30.52
Eastern Ontario	29.25	29.53	30.46
Grenville County	30.01	31.08	31.98
Frontenac County	29.45	29.83	30.28
Leeds County	32.02	31.94	32.39
Lennox & Addington	30.29	30.20	30.61

Three of the four counties in the Region started (and ended) the period with older populations than the rest of the Province. Only Frontenac County had a 'young' population, more like large urban areas in the Province. The recent suburbanization of Lennox and Addington County has moderated the aging tendency there somewhat. The population of Grenville County, among those of the Region, has aged the fastest in the past decade. (Table 2.3 arrays county age structures.)

Within the separate communities of these counties, the tendency toward aging of the population is generally evident. There are a number of variations, however, among rural areas. Howe Island's population has aged dramatically since 1961, but not so the populations of Wolfe and Amherst Islands. Adolphustown has a fast-aging population, but equally-rural Front of Leeds and Lansdowne does not.

TABLE 2.3: COMPARATIVE AGE STRUCTURES ONTARIO, EASTERN ONTARIO, THOUSAND ISLAND REGION, 1961 & 1971

	Ontario		Eastern Ontario		Grenville		Frontenac		Leeds		Lennox & Addington	
	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971
	%	%	%	%	%	%	%	%	%	%	%	%
0-4	11.86	8.27	12.09	7.81	11.14	7.86	11.63	8.04	10.60	7.79	12.09	8.93
5-9	10.81	10.17	11.21	10.33	11.22	10.67	10.65	9.92	10.08	9.85	12.02	10.71
10-14	9.50	10.22	10.23	10.81	10.02	10.57	9.37	6.96	9.28	10.13	10.37	10.86
15-19	7.00	9.26	7.75	9.91	7.69	9.62	7.63	9.46	7.49	9.55	7.57	9.69
20-24	6.20	8.75	6.48	8.74	5.43	7.14	7.35	9.99	6.08	7.44	5.28	7.21
25-29	6.77	7.36	6.47	7.07	5.68	6.29	7.16	7.82	5.99	6.39	5.55	7.22
30-34	7.37	6.20	6.64	5.94	6.43	5.47	7.23	6.29	6.16	5.69	5.81	6.08
35-39	7.52	6.08	6.99	5.76	6.36	5.43	7.33	5.99	6.43	5.38	6.27	5.43
40-44	6.37	6.15	6.35	5.81	6.12	5.53	6.49	5.74	6.22	5.66	6.03	5.34
45-49	5.78	6.09	5.68	5.91	5.87	5.70	5.65	5.82	6.29	5.66	5.36	5.34
50-54	4.96	4.94	4.76	5.14	5.14	5.04	4.67	4.94	5.68	5.38	5.14	4.83
55-59	4.14	4.45	3.79	4.54	4.47	4.98	3.66	4.41	4.54	5.41	4.29	4.37
60-64	3.50	3.63	3.29	3.64	4.11	4.47	3.11	3.43	4.01	4.64	3.82	3.98
65-69	2.88	2.95	2.82	2.88	3.49	3.76	2.69	2.65	3.61	3.68	3.22	3.38
70 +	5.25	5.48	5.38	5.65	6.91	7.49	5.31	5.47	7.46	7.28	7.12	6.59

Source: Census of Canada.

STRUCTURE AND CHANGE OF POPULATION

As noted above, the population of an area such as the Thousand Island Region may grow because of its population's tendency to reproduce itself or because of migration of people to and from the Region. In the review of the Region's age structure, it was shown that the population was generally older, on the average, and aging faster than other parts of Ontario. An older population will normally not have the tendency to expand greatly and thus population growth must come mainly through migration. Of course, there are a variety of combinations of these factors.

In order to look more closely at population change in the Thousand Island Region, an analytical method called regional/structural analysis is used. Through its use comparison can be made of the Region's growth with that of Ontario. By taking into account differences in the age structure of each, it is possible to determine whether the Thousand Island Region growth rate is due to its own age structure or to its ability to attract migrants. Each of the five year periods from 1951-1971 was examined.

The relative effects of age structure and migration are shown for Eastern Ontario and the four counties of the Thousand Island Region on Table 2.4. These data from the regional/structural analysis, indicate the proportion of the growth rate experienced by the Province and its age groups in the same five-year periods.

In general, when the structural effect is positive for a county, as in the case of Frontenac, its population is younger and has

TABLE 2.4: STRUCTURAL AND REGIONAL COMPONENTS OF POPULATION CHANGE FOR EASTERN ONTARIO AND THE THOUSAND ISLAND REGION, 1951 - 1971

	(percentages)			
	1951-56	1956-61	1961-66	1966-71
EASTERN ONTARIO				
Growth Rate	14.03	14.67	7.69	8.00
Diff. from Ontario	-3.53	-0.71	-3.93	-2.66
Structural Effect	-0.34	-0.30	-0.03	-0.15
Regional Effect	-3.19	-0.41	-3.90	-2.51
THOUSAND ISLAND COUNTIES				
Frontenac				
Growth Rate	15.79	14.37	10.97	4.69
Diff. from Ontario	-1.77	-1.01	-0.65	-5.97
Structural Effect	0.94	0.80	0.90	1.04
Regional Effect	-2.71	-1.81	-1.55	-7.01
Grenville				
Growth Rate	20.64	11.19	2.47	3.78
Diff. from Ontario	3.08	-4.19	-9.15	-6.88
Structural Effect	-4.16	-2.48	-1.88	-1.88
Regional Effect	7.24	-1.71	-7.27	-5.00
Leeds				
Growth Rate	10.93	8.85	4.78	1.97
Diff. from Ontario	-6.63	-6.53	-6.85	-8.70
Structural Effect	-3.10	-2.62	-1.86	-1.72
Regional Effect	-3.53	-3.91	-4.99	-6.98
Lennox & Addington				
Growth Rate	10.58	9.75	6.26	12.53
Diff. from Ontario	-6.99	-5.63	-5.36	1.87
Structural Effect	-3.92	-2.98	-2.13	-1.74
Regional Effect	-3.07	-2.65	-3.23	3.60
Ontario Growth Rate	17.56	15.38	11.62	10.66

Source: Census of Canada.

the capability to reproduce itself better than the Ontario average. A negative structural effect, as with Leeds County, indicates an older population less able to reproduce itself compared to the Province as a whole. Both Grenville and Lennox and Addington Counties are also weak in their age structure.

The regional effect is an indicator of relative attractiveness for migrants. When positive, it generally reflects an influx of migrants within the period, as with Lennox and Addington in 1966-71. A negative regional effect usually indicates a net outflow of people from the area. The latter has been the case for all four counties in all four time periods with only two exceptions. The picture on both regional and structural effects is much the same for the entire Eastern Ontario region. But, except for Frontenac County, the Thousand Island Region shows more pronounced differences than Eastern Ontario. (The Ottawa-Carleton area, an area of large in-migration, moderates the picture for the larger region.)

Thus, the general picture of population change for the past twenty years in the Thousand Island Region has the following components:

a) The steadily aging population has affected adversely the Region's capability of growth through natural increase compared to other parts of Ontario, with the exception of Frontenac County:

b) The Region has suffered substantial out-migration regularly from all its counties indicating a relative lack of attractiveness to migrants compared to the rest of the Province; Lennox and Addington in the 1966-71 period was the sole recent exception.

Although the Region grew by nearly 10,000 people in the period, it would have been necessary to add another 10,000 persons in order to maintain a growth rate similar to the Province in the 1966-71 period, by reducing out-migration and/or encouraging in-migration.

POPULATION CHANGE AMONG THE REGION'S COMMUNITIES

When population change is viewed from the level of the municipalities within the Region, several variations are revealed on the general picture described for the counties. A total of twenty-one municipalities, from Adolphustown in the west to Edwardsburgh in the east were subjected to the same population analysis as for counties. These municipalities, generally the island townships and the first tier of townships north of Lake Ontario and the St. Lawrence River, comprise 'the core' of the Thousand Island Region.

In 1951, a total of 99,000 people resided in the core municipalities. This represented seventy percent of the Region's total population. By 1971, the core municipalities had grown to over 155,000 population and then represented seventy-five percent of the Region's total.

Of the 63,000 additional population accruing to the Region between 1951 and 1971, 56,000 or eighty-seven percent, was accounted for by additions to the population of the core municipalities. This represented an overall growth rate of fifty-six percent in the twenty year period compared to forty-four percent for the four counties, fifty-two percent for Eastern Ontario and sixty-seven percent for the Province in the same period.

Among the twenty-one townships, villages, towns, and cities, six exceeded the growth rate of the group. Growth in and around both Brockville and Kingston dominated this picture. The median rate of growth in the twenty years for the core municipalities was about forty percent. Two municipalities, the island communities of Amherst and Howe Islands lost population; another, Wolfe Island, and two other rural areas, Adolphustown and Cardinal had less than ten percent growth rates. Table 2.5 arrays this data.

A Regional/Structural analysis of the twenty-one municipalities' age structure and growth trends reveals several important characteristics about core municipalities.

a) All the municipalities, except three, experienced extensive out-migration over the 1951-71 period. This occurred despite substantial growth which several experienced;

b) More than half of the municipalities have an 'older' population which has weakened their capability to expand their population through natural increase;

c) Three townships, two near Kingston and one near Napanee, have experienced substantial in-migration as well as developing or sustaining a younger, stronger population structure;

d) Five municipalities, Kingston (city), Brockville, and Prescott among them, have sustained generally younger age structures, thus aiding in their population expansion despite considerable out-migration.

TABLE 2.5: POPULATION OF CORE MUNICIPALITIES, THOUSAND ISLAND REGION OF ONTARIO, 1951 - 1971

	1000 ISLAND CORE MUNCIPALITIES	1951	1956	1961	1966	1971	1951-71 PERCENT CHANGE
LENNOX & ADDINGTON	Adolphustown (twp)	478	448	509	485	514	8%
	Amherst Island (twp)	449	433	441	378	367	-18%
	Ernestown (twp)	3,210	4,233	5,704	6,926	8,849	275%
	Fredericksburgh N. (twp)	1,412	1,553	1,713	1,781	2,274	61%
	Fredericksburgh S. (twp)	769	851	848	956	999	30%
	Bath (V)	406	637	693	758	810	99%
FRONTENAC	Howe Island (twp)	233	234	220	163	157	-33%
	Kingston (city)	41,259	48,618	53,526	59,004	59,045	43%
	Kingston (twp)	5,825	6,795	10,442	12,985	17,387	298%
	Pittsburgh (twp)	5,573	6,966	9,024	10,210	9,443	69%
	Wolfe Island (twp)	1,102	1,112	1,169	1,168	1,212	10%
LEEDS	Leeds/Lansd. Front (twp)	2,574	2,799	3,055	3,152	3,428	33%
	Brockville (city)	12,301	13,885	17,744	19,266	19,765	61%
	Escott, Front (twp)	920	938	976	1,010	1,042	13%
	Elizabethtown (twp)	5,739	7,318	6,557	7,072	6,513	13%
	Gananoque (town)	4,572	4,981	5,096	5,237	5,212	14%
	Yonge, Front (twp)	1,238	1,366	1,497	1,500	1,576	27%
GRENVILLE	Augusta (twp)	3,023	4,023	4,915	5,231	5,540	83%
	Cardinal (twp)	1,782	1,994	1,944	1,947	1,865	5%
	Edwardsburgh (twp)	2,710	3,296	3,646	3,826	3,914	44%
	Prescott (town)	3,518	4,920	5,366	5,176	5,165	47%
	TOTAL CORE MUNICIPALITIES	99,093	117,400	135,086	148,219	155,079	56%

Source: Census of Canada.

e) Areas in the core region with the weakest age structures and least capability of attracting new residents are:
   - rural areas in the extreme eastern sector
   - the rural island townships
   - rural areas in the extreme western sector

PERSPECTIVE ON FUTURE POPULATION

The various analyses of the population of the Thousand Island Region have revealed two persistent constraints on population growth:

a) a generally older age structure which inhibits an expansion of numbers through natural increase; and
b) a general inability to attract and/or retain residents and, thus, a regular loss of population due to out-migration.

These characteristics will play a critical role in the evolution of population in the Thousand Island Region in the future. If population is expected to grow, it will necessitate overcoming both the above constraints. Present developmental efforts do not portend any significant change in either age structure or migration.

Some recent population forecasts for the counties of Ontario may be inspected for the four Thousand Island counties to examine how these constraints have been dealt with. The Regional/Structural analysis, used earlier, can be employed for testing the forecasts by inserting projected age structures and totals and comparing the outcome with previous patterns of growth.

The forecasts made for the Region's population assume, for all counties, a substantial dampening of the growth rate after 1971 (see Tables 2.6 and 2.7). This parallels the projected lower rate for the Province. While this relationship may be reasonable it is not necessarily realistic for specific areas in light of their own history of population growth. For example, Lennox and Addington County, which has been experiencing substantial growth in Ernestown and North Fredericksburgh is projected to decrease its growth rate by more than one-half from its 1966-71 rate. A more detailed look at each county's forecast is warranted.

The Regional/Structural Analysis indicates that the forecasts depend on the following tendencies in age structure and migration for their validity:

Counties		Actual 1951 - 1971	Forecast 1971 - 1991
Frontenac:	Age	persistently young	substantially aging
	Migration	strong outflow	increased
Grenville:	Age	persistently old	increasingly younger
	Migration	strong outflow	decreased
Leeds:	Age	persistently old	increasingly younger
	Migration	strong outflow	decreased
Lennox and Addington:	Age	increasingly young	increasingly young
	Migration	moderate outflow	decreased

In three of the four counties, the forecasts project substantial changes in both their age structure and migration. For Frontenac County the structural effect is gradually reduced from a positive to a negative effect which amounts to assuming

TABLE 2.6: ACTUAL AND PROJECTED GROWTH RATES FOR ONTARIO AND THOUSAND ISLAND REGION, 1951 - 1991

	(percent) Actual				Projected (percent)			
	1951-1956	1956-1961	1961-1966	1966-1971	1971-1976	1976-1981	1981-1986	1986-1991
Ontario	17.56	15.38	11.62	10.66	8.15	8.28	7.96	7.02
Thousand Island Counties								
Frontenac	15.79	14.37	10.97	4.69	3.66	3.90	3.62	2.70
Grenville	20.64	11.19	2.47	3.78	2.36	2.71	3.19	2.91
Leeds	10.93	8.83	4.78	1.97	0.68	1.22	1.48	0.91
Lennox & Addington	10.58	9.75	6.26	12.53	5.67	6.58	7.29	6.92

TABLE 2.7: PROJECTED POPULATION GROWTH FOR THOUSAND ISLAND REGION, 1971 - 1991

(thousands)

Counties	1971	1976	1981	1986	1991
Frontenac	101.7	105.4	109.5	113.5	116.6
Grenville	24.3	24.9	25.6	26.4	27.2
Leeds	50.1	50.4	51.0	51.8	53.3
Lennox & Addington	28.4	30.0	32.0	34.3	36.7
TOTAL REGION	204.5	210.7	218.1	226.0	233.8

Source: Ontario, TEIGA.

the diminishment of the county's traditionally young population. In addition, out-migration is assumed to double on an annual basis. Both these situations seem improbable. In Grenville and Leeds Counties, the opposite situations are projected: the aging of the population is expected to reverse and population not expected to flow out at the same rate as before. In only Lennox and Addington are the projected effects not substantially at odds with the history of population growth of the past twenty years.

It seems safer to assume a stronger role for the traditional constraints on population growth of the Thousand Island Region than do the provincial forecasts. Thus, in the difficult task of population forecasting, the provincial forecasts might better be put in perspective.

County	Projected 1991 Pop.	Perspective on Forecast
Frontenac	116,600	could range considerably higher
Grenville	27,200	will not likely range higher
Leeds	53,300	will not likely range higher
Lennox and Addington	36,700	could range somewhat higher

The perspectives on the forecasts offered above assume no major changes in the economic development in the area. That is, they assume the same moderate growth of the past decade or so. Any strong development effort, such as that mooted for Prescott, could significantly affect these perspectives and, of course, the forecasts themselves.

3

GERALD HODGE

GANANOQUE AS A TOURISM COMPLEX

OVERVIEW ON GANANOQUE

Preface

'Gananoque, Canadian Gateway to the 1000 Islands', proclaim the signs on the highways leading into Gananoque. For the thousands of people who enter Gananoque each summer, and many others as well, the image is almost exclusively one of a tourist-serving town. But other literature about the town promotes it as 'The Birmingham of Canada' for its many metal-working industries. This image is true as well, even if less known. And, of course, there is the prosaic function of rural service centre that Gananoque also plays for the area between Kingston and Brockville.

But it is the tourist-serving function through which this report looks at Gananoque. In particular, it is the tourist-serving firms of the town which are examined. They are treated as a set of complementary activities aimed at serving the travelling and recreation-bound public in the Thousand Island Region. The aim is to find out how, through their operating characteristics, they contribute to the economy of the community and the Region.

In the remainder of this section a few of the salient facets of Gananoque, its population, and its economy are sketched. Subsequent sections examine the complex of tourism activities found in the town, collectively and by types of firms. The report concludes with a view of the relative importance of tourism for Gananoque and some of the implications for provincial and local policy.

The Situation of Gananoque

Gananoque is situated eighteen miles east of Kingston and eight miles west of the Thousand Islands International Bridge. This is the heart of the Thousand Island Region and Gananoque is the largest centre on the Canadian side of the area. Its population in 1971 was just over 5,200 and over the preceding twenty years had increased by only fourteen percent. However, this lack of population growth should not be construed to reflect a lack of prosperity in the community.

Gananoque is the location of several substantial metal-working firms, some whose predecessors were established there nearly a hundred years ago. These industries pay relatively high wages (about $7200 per year per employee in 1971). There is, as well as the tourist-serving sector, an extensive retail base in the community serving a combined trade area of approximately 250 square miles and comprising about 15,000 people in 1971. Gananoque enterprises also draw on this same area for their work force. Accurate employment figures are not available for the town, but it is estimated that year-round operations employ close to 3,000 persons. Almost thirty percent are drawn from surrounding areas. The 1971 labour force for town residents is given in Table 3.1.

TABLE 3.1: RESIDENT LABOUR FORCE BY MAJOR INDUSTRY GROUP GANANOQUE, 1971

Industry Group		Gananoque Residents
Primary (Agriculture, Mining, etc.)		15
Manufacturing		660
metal fabricating	345	
other manufacturing	315	
Construction, Transportation		250
Retail Trade		330
Other Trade		
Finance, Insurance, Real Estate		60
Accommodation/Food Services		175
Other Community, Business Services		315
Public Administration		215
Miscellaneous		110
Total Resident Labour Force		2,130

Source: Census of Canada, 1971.

Although the above figures do not allow a detailed view of the contribution of tourist-serving activities to employment, estimates can be made from the above and the present study. They indicate that about fifteen percent of the permanent labour force can be attributed to activities which serve the touring public.

The Service Sector of Gananoque

A detailed survey of the number and location of firms offering retail and business services was undertaken for this study. It reveals that, in 1974, there were 156 establishments in the service sector of Gananoque. This array of establishments is higher in number by, perhaps, twenty-five percent than for similar-sized service rural centres such as Napanee. This appears to be due to the presence of firms in the Specialty Retail, Food Service, Accommodation, and Transportation groups which cater to the large numbers of Thousand Island tourists. Table 3.2 shows the array of service firms located in Gananoque.

An attempt is made to rate the various types of service establishment by the effect of the tourist trade on their business. A simple scale is used to rate firms by the 'volume of annual business derived from tourist consumers'. Information for this comes from the detailed survey of a sample of Gananoque firms and estimates for other firms not surveyed. Although the categories are, of necessity, crude, it appears that about forty percent of the town's firms derive a substantial amount, a third or more, of their annual business from the trade of tourists.

For the establishments offering tours or accommodation, motels, and hotels, the percentage is upwards of one hundred percent; for specialty retail, especially gift shops, the proportion is likely to be about eighty to ninety percent; and for food service establishments the proportion is less than fifty percent, except those specifically associated with motels. A further one-fifth of Gananoque's firms may experience a substantial effect on their business volume due to tourism, such as the automobile service stations and entertainment establishments. Almost all firms experience some impact from tourist trade, particularly in July and August.

It is estimated that the firms comprising the service sector described above employ just over 900 persons on their permanent staffs. It is safe to say that at least thirty percent of these employees are with firms that are almost entirely dependent upon the tourist trade for their continued existence.

TABLE 3.2: NUMBER OF COMMERCIAL SERVICE ESTABLISHMENTS AFFECTED BY TOURISM, GANANOQUE, 1974

Type of Establishment		Number/ Percent	Effect of Tourist Trade*		
			High	Medium	Low
Specialty Retail	No.	31	21	3	7
	%	19.7			
Convenience Retail	No.	14	2	1	11
	%	8.9			
Durables Retail	No.	14		1	13
	%	8.9			
Personal Service	No.	15		2	13
	%	10.2			
Automobile Service	No.	17		11	6
	%	11.5			
Food Service	No.	18	11	7	
	%	11.5			
Accommodation	No.	19	18	1	
	%	11.5			
Transportation	No.	11	9	2	
	%	7.0			
Entertainment	No.	6	2	4	
	%	3.8			
Business Services	No.	11	1		10
	%	7.0			
Total Establishments		156	64	32	60
Percent		100.0	40.4	20.5	39.1

Source: Dun & Bradstreet, Reference Book, 1974 and Field Survey September 1974.

* This is a general scale based on observations of volume of annual trade derived from tourist consumers: Low, 0-15%; Medium, 15-30%; High, 30-100%.

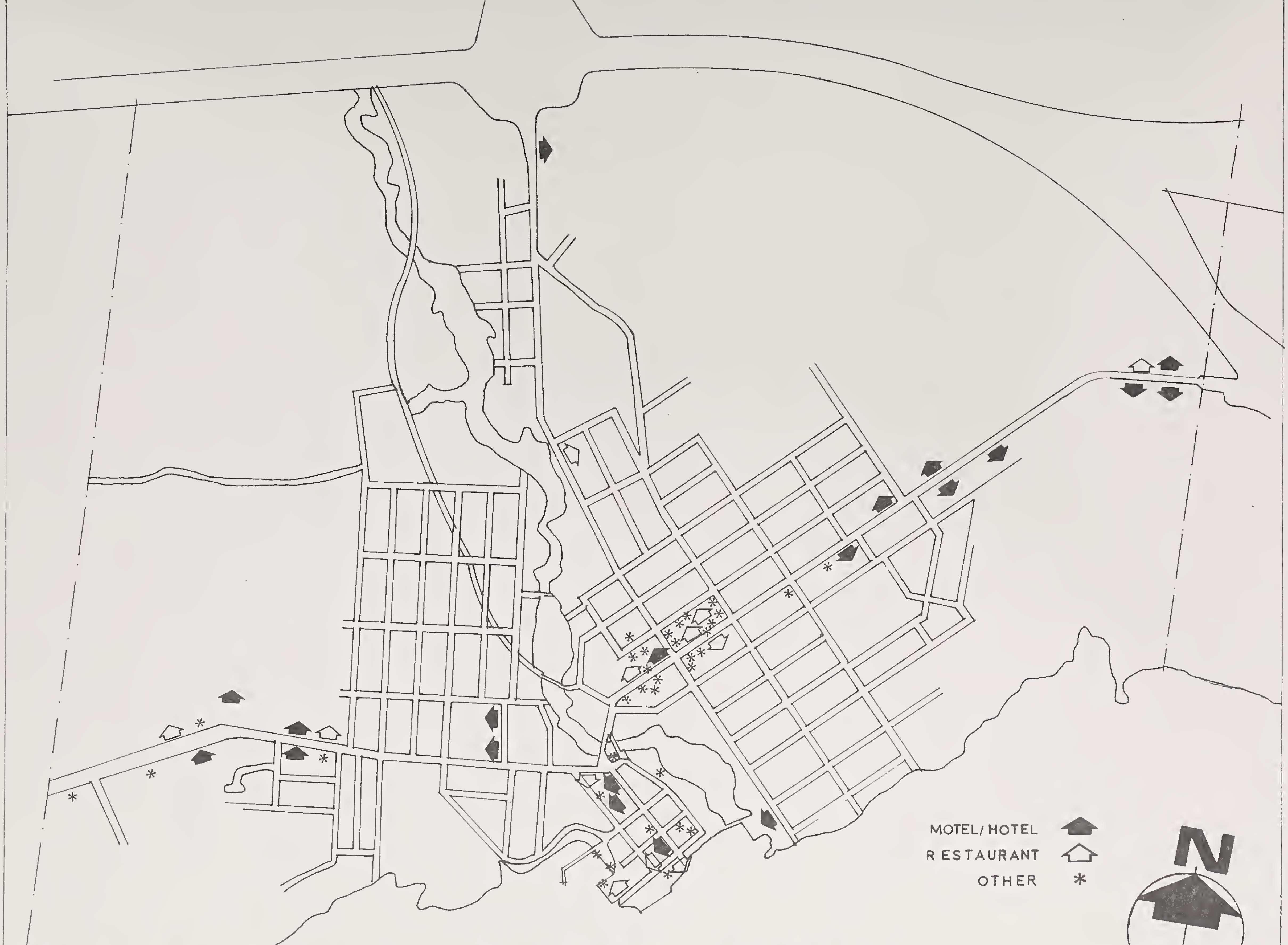
A map of service establishments in Gananoque with high tourist-serving characteristics shows two locales as being prominent; (1) along the main east-west highway, which is also the primary business street; and (2) on the road to the harbour and at the harbour (Figure 4).

THE COMPLEX OF TOURISM ACTIVITIES

Scope of the Complex

Clearly, a large number of firms catering to the needs of the touring public have chosen to locate in Gananoque. The reasons for the concentration of the fifty or so tourist-serving firms in the town are, undoubtedly, varied. For some, such as the tour boats and marinas, it is the presence of a large harbour. For others, such as the gift shops, it is the availability of building space to occupy. For still others it is the presence of already-existing firms catering to tourists which they can complement with additional services.

The resulting concentration of tourism-serving activities in Gananoque, the largest cluster in the Canadian Thousand Island Region, may be termed a tourism complex. The various firms comprise a set of activities linked to a common specialized and localized market -- service to the travelling public in the



TOURIST SERVING FIRMS, GANANOQUE, ONT. 4

Thousand Island Region.* Such a cluster of activities often serves to strengthen the economic position of each firm of the cluster and the economy of the area as well. This occurs because the tourists can obtain most of their needs in one locale and this helps to minimize what the economist calls 'leakages' of purchases to other regions.

The object of the present analysis is to circumscribe the Gananoque tourism complex: which activities comprise it? are they linked to one another? An initial rendering of the complex, derived from Table 3.2, shows the following activities affected most, and thus dominant, in serving tourists:

Specialty retail
Food service
Accommodation, and
Transportation

There was also the occasional firm in a few other categories that was strongly affected by the tourist trade and should be considered part of the complex.

A second and more detailed rendering of the above categories reveals the array of tourist-serving establishments given in Table 3.3. A total of sixty-seven activities, or more than forty percent of Gananoque's commercial service sector, can be considered part of the complex. A survey of eleven firms indicates only a few technical or production linkages among the

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* Although this report derives its analytical approach from 'industrial complex analysis' it does not presuppose a set of technically-linked activities which have extensive exchanges with each other. It deals, rather, with activities which form a complex by virtue of their common market and the localization of the cluster. For a contrasting, but related, view see, Stan Czamanski, Study of Clustering of Industries, Halifax, Institute of Public Affairs, Dalhousie University, 1974.

TABLE 3.3: TYPES OF ESTABLISHMENTS COMPRISING THE TOURISM COMPLEX OF GANANOQUE, 1974.

TYPE OF ESTABLISHMENT		NO.
Specialty Retail		21
Antique Shops	3	
China and Gift Shops	8	
Clothing Imports	2	
Food Specialties	1	
Handicrafts	2	
Linens/Wool	2	
Sporting Goods	3	
Food Service		16
Restaurants (separate)	9	
" (in Motels/Hotels)	5	
" (in other establishments)	2	
Accommodation		19
Motels	14	
Hotels	2	
Tourist Homes	1	
Motor Court	2	
Transportation		7
Boat Tours	2	
Marinas/Boat Sales	4	
Water Taxi	1	
Outboard Motor Repairs	1	
Entertainment		2
Summer Theatre	1	
Haunted House	1	
Manufacturing		1
Boat Building	1	
Business Services		1
Laundry	1	
TOTAL TOURISM COMPLEX		67

establishments. (These are discussed later.) Rather, they gain their communality from the complementary ways they serve one or several facets of the area's tourism economy.

Tourism in the Thousand Island Region has a number of different facets which express themselves in demands for different combinations of activities from the Gananoque complex. The most prominent of the types of tourism and the linkages to the complex are given below:

Type of Tourism	Gananoque Firms Affected
1) Short-term visitors to the Region (mostly by land) who come to 'see the Islands'.	Boat tours, motels, restaurants, gift shops, entertainment, (automobile service).
2) Visitors to resorts in the Region who come to Gananoque 'to shop'.	Gift shops, restaurants, entertainment, boat tours.
3) Cottagers in the Region who frequent Gananoque for supplies and recreation.	Restaurants, gift shops, marinas, entertainment, (food stores, hardware stores, automobile service, personal services).
4) Boaters traversing the Region who stop in Gananoque for supplies and recreation.	Marinas, restaurants, gift shops, entertainment, (food stores, personal services).

Something of the scale of tourism activity which the Gananoque firms cater to is indicated by the following figures:

** The tour boats based in Gananoque carry upwards of 200,000 passengers (1974) in the May to October period; sixty percent of this occurs in July and August each year. To the tour boat firms this business is worth $1 million annually (1974).

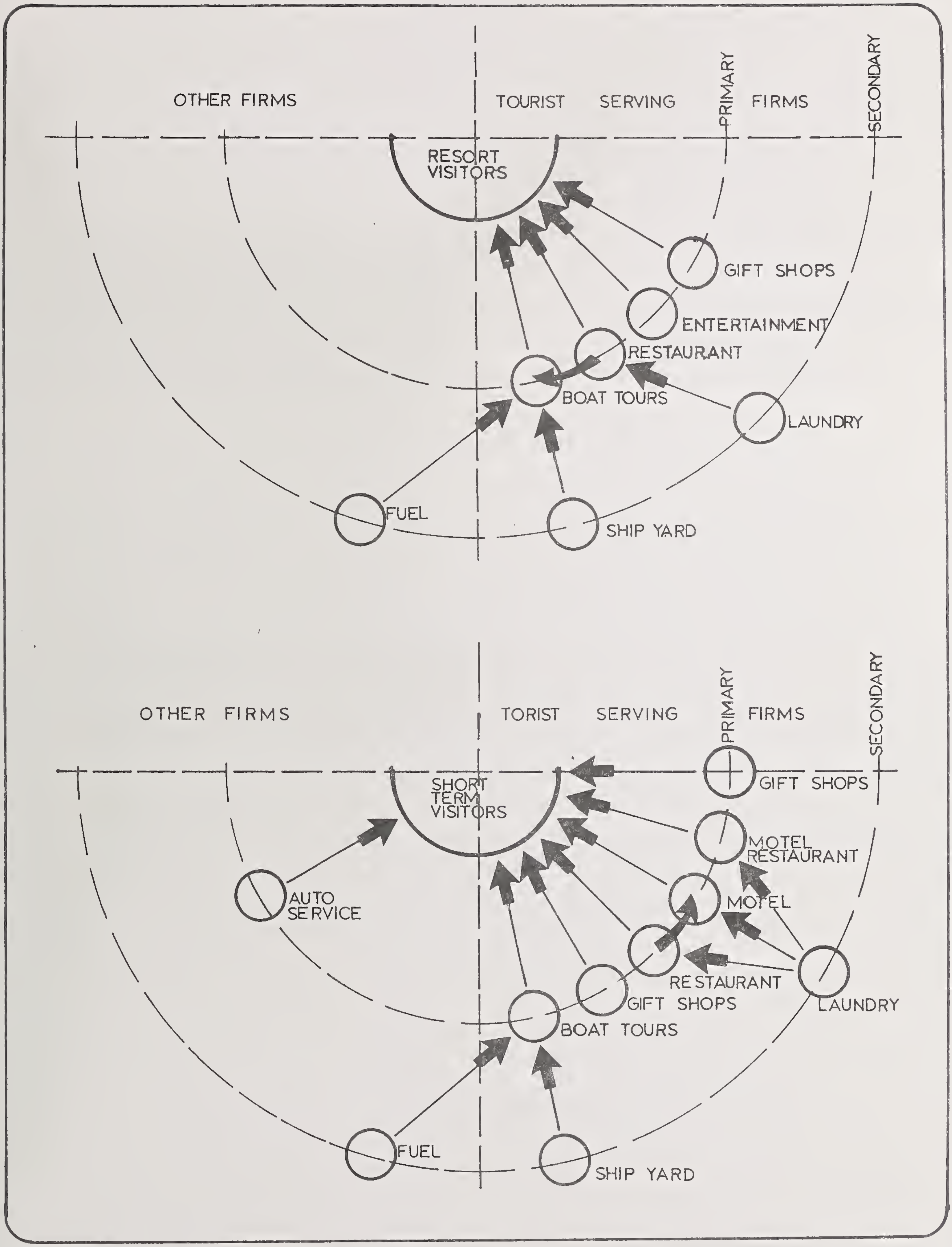
** The nineteen motels and hotels with their nearly 500 units operate at over ninety percent capacity in the July - August period; this amounts to accommodating about 50,000 persons.
To motel and hotel firms in Gananoque, tourism brings about $1.2 million of business annually (1974), sixty percent of this occurring in the two summer months.

** An estimated 10,000 boats visit Gananoque's various marine facilities each summer.

** There are approximately 1000 cottages in nearby areas accommodating over 4000 persons each summer; this enlarges the service area population by twenty-five percent.

Linkages of the Complex

A complex of activities gains its significance from the nature and extent of the linkages of the establishments. These linkages may be of three kinds in this case: (1) linkages to the tourist market and other markets of the firms; (2) linkages to one another for supplies; and (3) linkages to other suppliers inside and outside Gananoque. Each of these may be considered briefly.



TOURISM LINKAGES AMONG BUSINESS FIRMS / GANANOQUE ONTARIO / 5

(1) Linkages to Markets: All the establishments in the complex respond to the demands of several markets, although serving tourists, directly or indirectly, comprises the largest proportion of their business. With the probable exception of motels, the residents of Gananoque and other nearby communities (including Kingston and Brockville) also form a significant market for the firms of the complex. For those firms operating primarily in the summer season, the proportion of their business attributable to out-of-region visitors is highest.

Table 3.4 below lists the proportion of total business attributable to customers from different locations for three types of firms in the complex. (This information is derived from the detailed survey of sample firms.) These we may call the OUTPUTS of the complex. In general, the greater the 'export' of goods and services beyond Gananoque, the greater the return to the local economy.

TABLE 3.4: GEOGRAPHICAL DISTRIBUTION OF SALES FROM SELECTED FIRMS IN THE TOURISM COMPLEX, GANANOQUE, 1974

Type of Firm	Proportion of Sales Volume		
	Gananoque Area Residents	Residents of Other Thousand Island Communities	Out-of-region Visitors
Gift Shop	5%	15%	80%
Motel	--	--	100%
Restaurant	45%	10%	45%

(2) Linkages Among Firms in the Complex: Firms serving tourists directly require various supplies, materials, and services for their operation, or INPUTS. Some inputs may be obtained from other firms in Gananoque; others may be obtained from other firms in Gananoque; others may be obtained from

outside suppliers. Dealing with the former first, there are several significant linkages among firms locally:

** many of the restaurants and motels obtain linen service from a local laundry;

** a local shipyard is associated with a tour boat firm and supplies new craft and maintenance of existing boats;

** some local restaurants provide food catering services to tour boats;

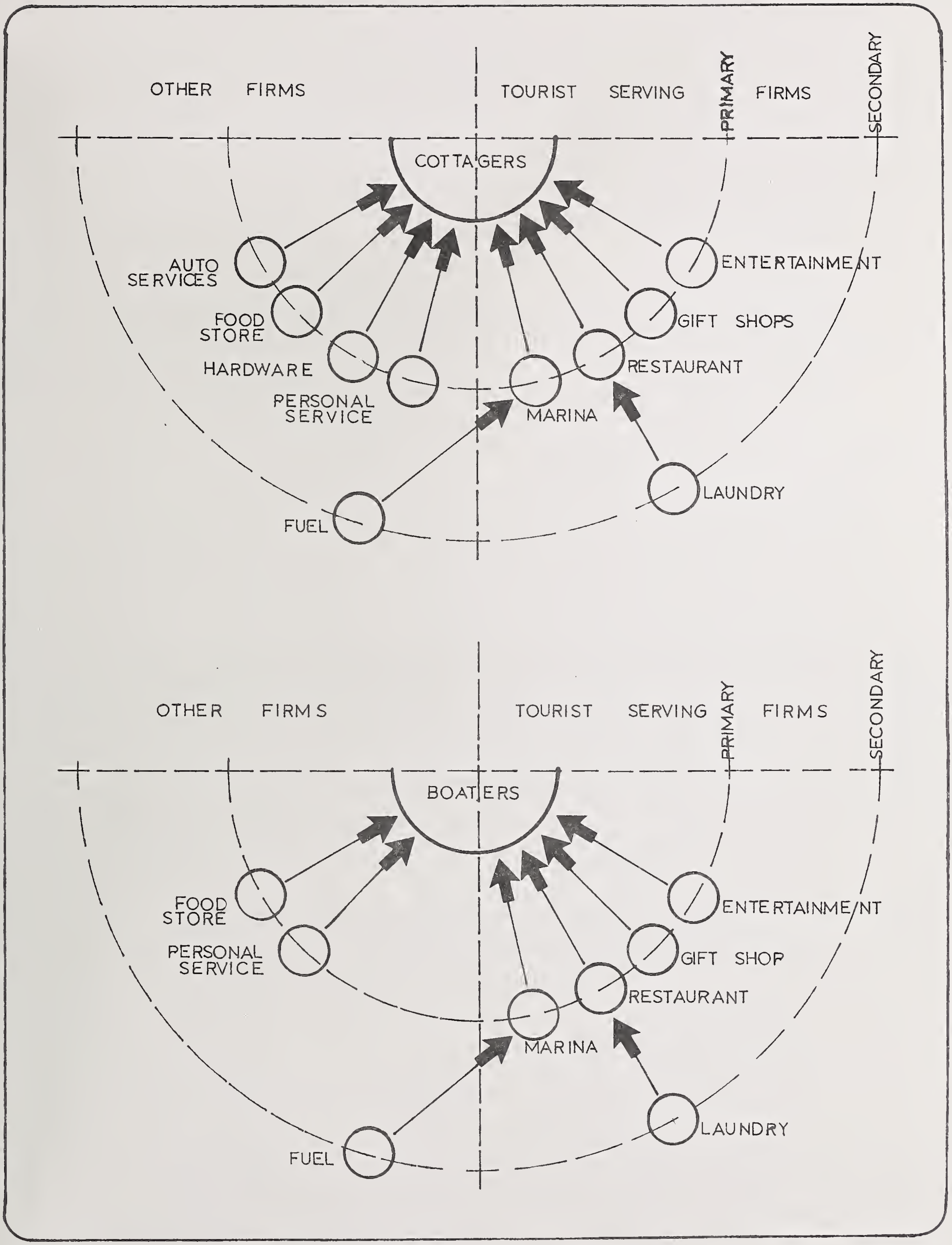
** several motels have their own restaurants, taverns, and gift shops;

** an elaborate concession system exists for selling tickets for boat tours through motels, etc.

There are, as well, lesser linkages between the tour boat operations and marinas and local fuel distributors for diesel oil and gasoline. The latter have not been considered a part of the basic tourism complex.

The various linkages may be appreciated more easily in the accompanying diagrams. The different facets of tourism identified earlier are displayed separately with the linkages which exist between them and Gananoque establishments as well as those links among establishments. These diagrams also show (with dashed lines) linkages that other commercial establishments in the community share with tourism (see Figures 5 and 6).

That facet of tourism comprised of short-term visitors reveals the most extensive set of linkage and most elaborate set of



TOURISM LINKAGES AMONG BUSINESS FIRMS / GANANOQUE ONTARIO / 6

interrelations among firms of the complex. In general, the more extensive the linkages the less 'leakage' of economic benefits from the community. In other words, the more goods and services which the complex obtains locally, the greater the return to local economy.

(3) Linkages to Non-Local Suppliers: Many inputs for the tourism complex cannot be obtained locally, such as merchandise sold in the different gift shops and food supplies needed by restaurants. Indeed, because of the general lack of wholesaling activities in Gananoque (fuel supplies is the major exception), almost all merchandise must be obtained outside the community. Some firms of the complex also prefer to obtain services, such as linen service for restaurants and motels, from outside firms.

Wholesalers in Kingston appear from the detailed survey of firms to be major suppliers to the Gananoque complex. Most food supplies for restaurants are obtained from Kingston as is linen service for some restaurants and motels. Some meat is supplied from Brockville. Finished goods for sale to tourists --- gifts, clothing, souvenirs, marine parts, etc., --- are obtained from suppliers in Toronto, Montreal, or abroad.

The inputs obtained from outside Gananoque amount to one-third of the input for a restaurant and two-thirds for a gift shop or other retail outlet in the complex.

Labour Inputs to the Complex

All the firms in the Gananoque tourism complex use a substantial amount of labour in purveying their services. The range for those firms surveyed is from thirty percent to fifty-five percent of their total input costs.

Between seventy-five and eighty percent of employees in firms surveyed come from Gananoque. The remainder are drawn from nearby communities. Most firms in the complex hire additional workers in the June - September peak period of operations. The increase in staff may amount to as little as one-third. But many firms such as the restaurants, motels, and boat tours increase their staff by several times. For example, the firms surveyed have an aggregate work force in off-peak months of sixty-seven employees. This grows to one hundred and seventy employees in July and August.

Origins and Destinations of Inputs and Outputs

The outputs and inputs of the firms in the tourism complex may be combined in a matrix form which displays their geographical origins and destinations. That is, where are the goods and services destined and where are the supplies for producing outputs obtained?

There is one additional category of inputs and outputs which must be included and it comprises the contributions of, and the returns to, the firm itself. Or, more precisely, the owner(s) of the firm. Almost all firms in the Gananoque tourism complex are locally owned and operated. The owners contribute labour as well as managerial skills to the operation; and they receive a return on their contribution through salaries, dividends, drawings, etc. In the accompanying matrices these are treated as inputs to the firm as well as outputs from the firm (see Figure 7).

The matrices are, thus, flow charts. The flow of outputs may be read across the top row; that is, outputs flow from the firm to local, regional, and extra-regional customers as well as to itself. The flow of inputs may be read down the first column;

TO FROM	FIRM	LOCAL	REGION	EXTRA REG
FIRM	owner/ manager	meals 45%	meals 10%	meals 45%
LOCAL	labour 75%			
REGION	labour 25%			
EXTRA REGION	linen/food (all)			

restaurant
12 MONTHS

TO FROM	FIRM	LOCAL	REGION	EXTRA REG
FIRM	owner/ manager	-	-	accomodation 100%
LOCAL	labour 80% linen (all)			
REGION	labour 20%			
EXTRA REGION	supplies (all)			

motel
SEASONAL

TO FROM	FIRM	LOCAL	REGION	EXTRA REG
FIRM	owner/ manager	goods 5%	goods 15%	goods 80%
LOCAL	labour 80%			
REGION	labour 20%			
EXTRA REGION	merchandise (all)			

gift/specialty store

ORIGINS & DESTINATIONS OF INPUTS & OUTPUTS OF TYPICAL TOURIST FIRMS / GANANOQUE ONTARIO /

that is, inputs flow to the firm from the local labour pool and other local firms, from firms outside Gananoque but in the Region, and from firms outside the Region.

Since individual firms, even of the same type, differ in their source of inputs, matrices are presented for three firms which typify their categories. It can be seen from these charts that it is the local area and nearby region which supply the labour for firms in the complex but that, in general, most supplies and services are obtained outside the Region. Most outputs are destined outside Gananoque and, generally, outside the Region.

Another significant conclusion can be drawn from these matrices regarding the impact of tourism on the economy of Gananoque. The main economic benefits of tourism are delivered through payments to employees (including owners) of the firms delivering services directly to tourists. Only a small proportion of the economic returns is derived from those firms purchasing goods and services from other local firms. Up to one-quarter of the payments to employees of tourist firms 'leaks' to nearby communities. But, since these are mostly within Gananoque's trade area, many of these benefits return to the town.

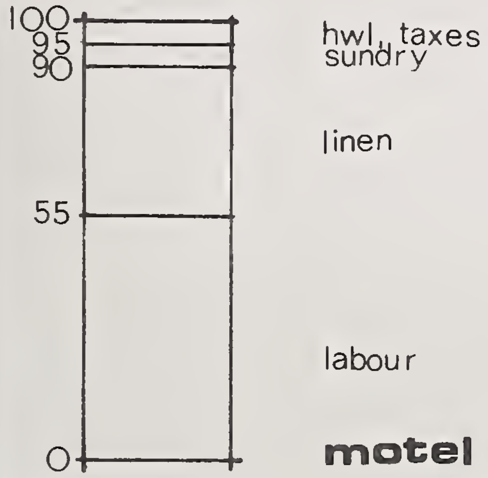
In other words, the 'multiplier effect' of expenditures by tourist in Gananoque's tourism complex is felt mainly through employees of complex firms spending their salaries locally. This report does not deal with capital expenditures of firms in the tourism complex but, undoubtedly, the construction of facilities and buildings constitutes another way in which tourism benefits Gananoque.

PROFILES OF TOURIST-SERVING FIRMS

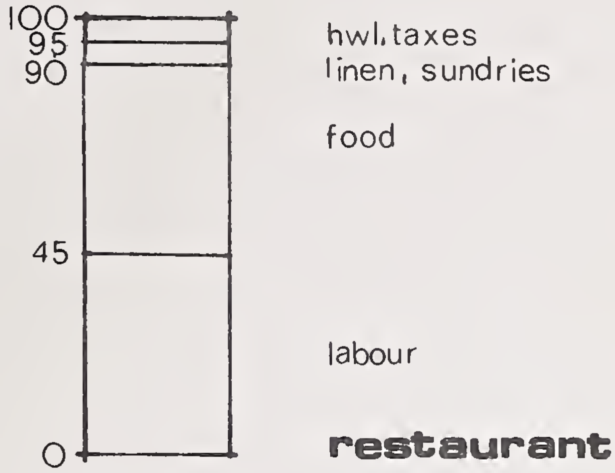
In order to define better the economic impact on Gananoque, it is necessary to examine in some detail the structure of costs of firms in the complex. To the information of where they obtain their labour or merchandise, for example, one must be able to add knowledge about the proportion each input contributes to their costs of operation.

Eleven tourist-serving firms were interviewed. They covered five different types of establishments -- motels, restaurants, specialty retail shops, tour boats, marinas. Each firm was asked detailed questions regarding the nature and source of inputs, the destination of outputs, linkages to other firms, and the share of each significant input in their total costs of operation. Information was not gathered on capital costs to firms as this turned out to be extremely variable; nor was data available on the delicate area of profits.

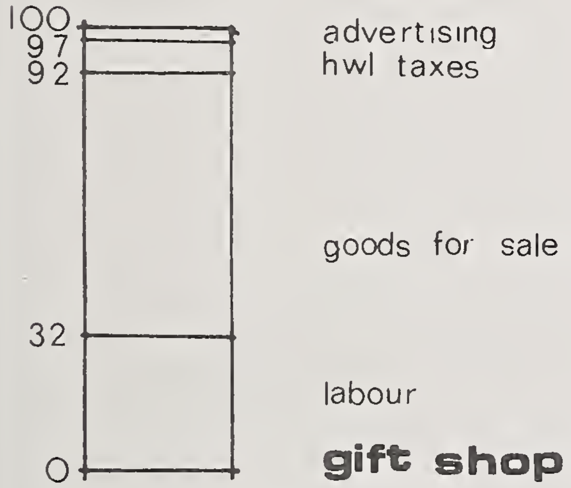
The charts on the following page (Figure 8) illustrate for each type of establishment the share of operating costs for important inputs. In each case, two items of cost predominate and account for more than seventy percent of the total. One is always the labour needed by the firm to dispense its services or goods. Labour costs take up from thirty to fifty-five percent of all operating costs in the firms interviewed. The second item, in the case of the three types of establishments which sell goods -- gift shops, marinas, restaurants -- comprises merchandise or supplies purchased for sale. In the case of motels and tour boats, the second major item of cost is supplies needed to carry on operations, such as fuel for the



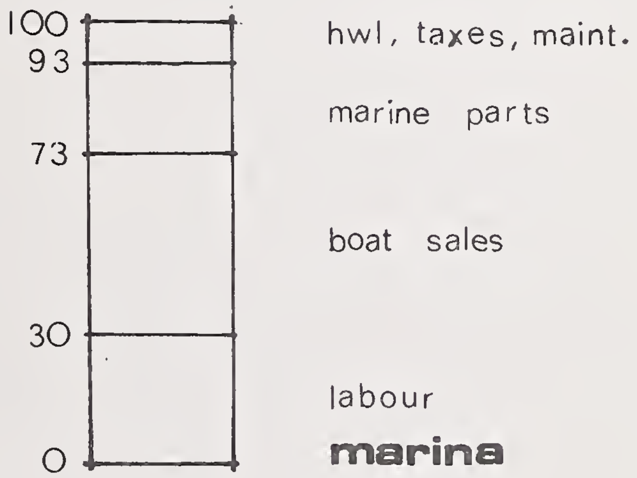
motel



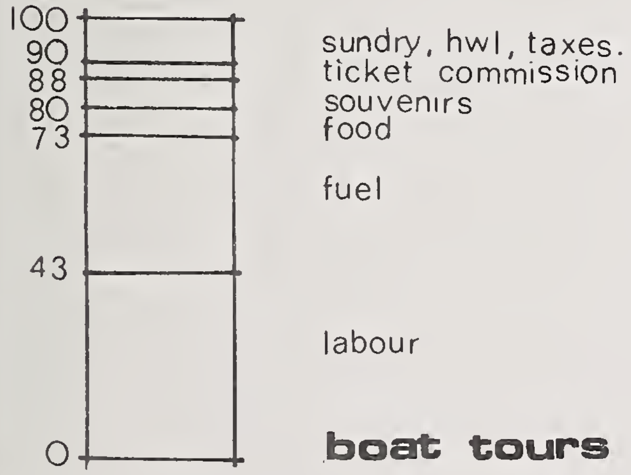
restaurant



gift shop



marina



boat tours

PROPORTIONS OF INPUTS OF TYPICAL TOURIST FIRMS / GANANOQUE ONTARIO / 8

boats and linen for the motels.

Only a small proportion, usually ten percent or less, of costs are attributable to factors such as heat/water/light (HWL), maintenance, local taxes, or insurance. This is true for all firms interviewed. The tour boat operations show the most elaborate cost structure due, it seems, to their more elaborate set of linkages to other suppliers described earlier.

From these profiles it is possible to suggest something of the scale of economic impact of tourism on Gananoque. First, about forty percent of all operating expenditures of firms in the tourism complex flow to employees, eighty percent of whom live in the town. Second, for tour boat and motel operations, a further thirty percent of expenditures may be purchases made from local suppliers; restaurants also may purchase some local supplies but at a much smaller rate. Third, up to ten percent of operating expenditures are for sundry items, most of which, like local taxes, utilities, and maintenance, flow into local hands.

Thus, the operations of tour boats and motels provide, potentially, the largest multiplier effect from their business. That is, less of their expenditures 'leak' from the community. This must be qualified by noting that it depends upon where fuel supplies and linen services are obtained. If from outside Gananoque, the effect will be no higher than for restaurants, gift shops and marinas.

Two other types of retail firm in Gananoque were interviewed. Although they should not be considered part of the complex, their cost profiles were very similar to, say, the gift shops. Their operations benefitted from tourism to the extent of ten to twenty percent of their annual business and payments to labour were their major direct contribution to the local economy.

There were not, as far as could be determined, very extensive interconnections of tourist establishments through ownership. There were a few cases encountered where two or more firms in the complex had common ownership, but the operations of each firm were not functionally linked in the complex at this time.

In terms of labour skills used by firms in the complex, the array is small as is the number of persons involved. In restaurants, cooks and chefs are key skills needed; in tour boat operations, the boat captain and engineer are special skilled jobs. There are, undoubtedly, other invaluable employees in the various shops, restaurants and motels, but their value usually comes more from experience than formally-trained skills.

The total labour force in the tourism complex is not possible to determine; however, it seems that it may total 2-300 year-round employees. From the survey it is known that the permanent staffs are added to extensively in the summer months, sometimes by two or three times. The summer labour force in the complex probably totals 500 or more persons. That this amount of people can be available for short-term work and capable of carrying out the jobs, is a special strength of the Gananoque tourism complex. And, it must be remembered, that all other Gananoque service-firms also expand their labour force by about forty percent in the summer.

The peak period of operations for firms in the complex comprises the months of July and August. In this period as much as seventy percent of their yearly business may be conducted. While the retail operations tend to operate ten to twelve months of the year, the motels, in particular, mostly operate only six to eight months, from April to October. Only seven of the fifteen motels, accounting for fifty percent of all rooms, are open all year. The tour boats are affected not only by the tourist flow, but also by weather conditions and general climatic conditions.

TOURISM AND DEVELOPMENT IN GANANOQUE

The Qualitative Side

Tourism, not always regarded with equal favour throughout Gananoque, provides an appropriate complement in the economic base of the community to the traditional metal-working industries. When so many communities in this part of Ontario saw their manufacturing plants from the heyday of industrialization in the mid- and late-nineteenth century depart, Gananoque, almost alone, sustained little loss. But the gain in the manufacturing sector over the years is not appreciable, either. Moreover, Gananoque's role as a rural service centre provides not only a limited base for the town's economy, but also a base which is not expanding.

Gananoque's admirable location relative to the Thousand Islands recreation region helped spawn a large and viable group of tourist establishments in the community.* This development spans many decades, although is more prominent since 1960, and blends easily into the townscape in most respects. Tourism generates over ten percent of the town's year-round jobs and an array of fine stores, restaurants, and motels not typical of most towns of 5000 people.

The growth of the tourism complex in Gananoque thus complements the two older sectors of the economic base -- manufacturing and rural servicing -- by providing a 'cushion' of jobs and capital investment and diversifying the town's economy. One can speculate, too, that the greater array of quality establishments which tourism generates in the community helps bolster the town's image to others, its own self-esteem, and its tax base. As well, the extensive set of tourism activities demonstrates the generous fund of entrepreneurial skills present in the community.

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* For whatever reason, tourist firms have mostly concentrated in the town and not straggled out along the highways; something to be thankful for and to further nurture.

Tourism also provides Gananoque with a means of achieving substantial economic growth without substantial increases in population. Expenditures on the leisure side of life are among the fastest growing in the Canadian economy. Tour boat operators have been experiencing a growth in passengers of ten percent per year during the past several years. Furthermore, tourism in Gananoque, being limited to the summer season, involves a type of economic growth that does not demand drastic permanent transformation of the social and institutional structure of the community. The year-round bases of manufacturing and providing for rural needs give a stability to the town that is disturbed only briefly. This is an advantage that Gananoque has because of its size and traditional economic base that smaller centres in tourist regions may not have.

The Quantitative Impact of Tourism

From the study of firms in the tourism complex, it is possible to quantify several of the dimensions of the current impact of tourism on Gananoque. A complete picture cannot be rendered without a survey of all firms and of tourist expenditures, but estimates can be made of these facets sufficient to allow the scale and nature of the impact to be ascertained.

1) Gananoque hosted an estimated 250-300,000 visitors in 1974, two-thirds of those in July and August.

2) Visitors to Gananoque in 1974 probably spent a total of $5-6 million in the various establishments of the town. (A study by the St. Lawrence Parks Commission in 1972 indicated an average expenditure in the locality of $25 per person of the visitors to its facilities.)

3) A complex of about sixty-five firms, or forty percent of the commercial and retail firms in Gananoque, are primarily oriented to serving tourists. Probably three-quarters of visitor expenditures accrues to these firms.

4) Businesses primarily serving the touring public provide permanent employment for about 250 persons from Gananoque and vicinity. During peak periods, total employment in these firms increases to 500 or more.

5) Most other retail and commercial establishments also experience sharply increased sales from the summer visitors and they increase their staffs by twenty-five to fifty percent in this period. This probably demands an additional 150 or more workers.

6) Nearly fifty-five percent of the money spent by tourists in Gananoque leaves the region in the form of purchases by firms of goods and services from other centres.

7) The major return to the local economy from tourism is through the wages and salaries paid to employees of tourist complex firms. The average firm spends twenty-seven percent of its income for labour. Upwards of $1.5 million accrues to Gananoque households through wages and salaries.

8) Other income from tourism benefitting Gananoque is obtained through profits to locally-owned and operated firms (which are the majority) and through payments for utilities, rent, local taxes, and sundry items. In combination, these probably account for fifteen to twenty percent of sales. (There are, as well, returns to the town from capital investment made for tourist facilities. No information was gathered in this study about this aspect.)

9) As a result of the general lack of linkages among firms in Gananoque and the high proportion of income spent therefore on 'imports', every dollar of tourist expenditure means a rise in local net income of only $0.16.
(In a short Appendix, the derivation of this multiplier is described.)

10) For every three permanent jobs created in the tourism complex, there are up to two new jobs generated in the Gananoque service sector.
(This assumes that tourism jobs have the same relation to the local service sector as do jobs in manufacturing in Gananoque.)

Tourism in Gananoque's Future

Gananoque's future in regard to tourism is already clear in many respects, but not in all. On the one hand, there is little doubt, short of a drastic economic depression, that people will continue to come in large numbers to 'see the Islands', shop in the stores, eat in the restaurants, etc. The complex of tourist activities established in Gananoque seems assured of an ample market to serve well into the future. Indeed, recent experience of tour boat operators, on which they are basing prognostications for their own business, shows an annual rate of growth of visitors of up to ten percent. This could mean that in 1980 visitors to Gananoque could be half again as numerous as they are now.

On the other hand, trends of tourism are only crude indicators of possible future conditions in the community. At best, the trends tell the general scale of the situation Gananoque could face. They tell nothing about the qualitative changes that might accompany the expansion of tourism or about the decisions that might be needed to facilitate, to modify, or to impede the trends. In short, trends encapsulize a host of decisions by citizens, firms, and governments which need to be taken to make the trend come true. It may be felt, conversely, that the trends portend future conditions that are not considered appropriate; seeking an alternate future also requires a host of decisions to achieve that end.

Looking, first of all, at the expected expansion of visitors to the Thousand Island Region and Gananoque, there will be a number of implications for the town because of the scale of increase. By 1980, or within a few years after that, Gananoque could be called upon to cater to an additional 100,000 persons each summer. Four facets of the tourism complex that might sustain significant expansion are (1) motels, (2) restaurants, (3) tour boats, and (4) entertainment activities.

Currently, motel facilities are utilized at full capacity during the peak July and August period. An increase of visitors of the scale suggested could call for an expansion of accommodation capacity of forty percent over the next decade. Restaurants have more capacity to absorb growth in diners (by extending meal times) but considerable expansion could also be anticipated. Tour boat capacity is currently being expanded and may be able to absorb, at least in the next few years, substantial growth in numbers of visitors. Entertainment activities are meagre at present (and this is considered a detriment by many visitors) but expansion of visitors of the scale suggested could provide the necessary market to attract more activities and facilities.

If this degree of expansion occurs, over the next decade permanent employment in the firms of the tourism complex could grow by one hundred jobs. The indirect effect of tourism's growth would be a further fifty to sixty jobs in the town. The total population impact would be in the order of an additional 500 persons, or ten percent growth over 1971 levels.

But what choices does Gananoque have? Probably none in curtailing the number of visitors to the town. But if no effort is made to meet the increased demand for food and accommodation, the impact could be significantly modified. If motels and restaurants cannot cope with the demand, visitors will, in all likelihood, seek these services in other nearby centres such as Kingston and Brockville.

There is another aspect of Gananoque's tourism that is already utilized to capacity--facilities for boating visitors. Effectively, no further expansion can occur in the marina sector at present, particularly in short and medium-term boat berthing. Gananoque is, in this facet, able to influence choices that will affect its future growth in marine tourism activities.

The various decisions about future tourism development in Gananoque should also be viewed in terms of the extent and nature of the relations among firms in the tourism complex. As this study shows, the effects of increased tourism (i.e., the 'payoffs') differ according to which types of establishment are called on to absorb the demand. Or, putting it another way, the greatest return in income will be through those tourist activities that have the most extensive linkages. At present, short-term visitors, coming primarily for boat tours of the

Islands, utilize the largest array of tourist establishments in Gananoque. Those that also stay overnight and eat in town restaurants make expenditures with the greatest 'multiplier effect'.

Consideration might be given to obtaining a greater return from tourism. This could occur in two ways. First, by increasing the array of types of tourist-serving establishments, tourists could be attracted to spend more in the town. The most obvious component for expansion is entertainment. Second, by increasing the amount of goods and services tourist-serving firms purchase locally, there will be a larger multiplier effect of tourist expenditures. The options for providing greater 'depth' to the complex are few at this time, however. The major inputs to firms of the complex are in services (linen supplies for motels and restaurants) and merchandise for over-the-counter sales (gifts, food, boats, etc.). Except for the local laundry and fuel suppliers, firms must go outside for inputs. The expansion of the complex may warrant the establishment of more wholesale and business services in Gananoque. Expansion may simply stimulate Kingston and Brockville firms to offer more and better services. The latter has the advantage of keeping much of the income within the Thousand Island Region, rather than leaking away to Toronto, Montreal, etc.

Finally, consideration could be given to new directions for tourism in the area that might have different effects on Gananoque. Possibilities that appear realistic are the development of some extended event, such as a cultural festival, or new forms of family recreation in the Thousand Island area. Gananoque would reap economic benefits from any new developments because of its strategic location in the Region. There may, of course, be attendant costs for the town ranging from permanent disruption of community life to increased pollution. No development should be brought to fruition without a thorough assessment and public discussion of its impact on the community and Region.

APPENDIX A

Derivation of a Tourist Income Multiplier for Gananoque

The expenditures of tourists go to the vendor of a good or service. The vendor uses part of this direct income to buy goods, part to pay salaries, rent, utilities, and taxes, part goes to purchase services and part goes to profit. To the extent that the vendor of a tourist establishment hires local people and buys goods and services locally, the initial expenditure stays in the community to be spent by other vendors and employees. This second round of expenditures generates demand in local businesses for their goods and services. The latter, indirect, effect is governed in magnitude by the extent to which firms in the Region supply each other with goods and services.

The study of firms in Gananoque showed that linkages are meagre and that there is, therefore, considerable 'leakage' of the income from serving tourists. Data from the study showed that, on the average, each tourist dollar was allotted as follows by vendors:

Labour	27%	accruing locally	47%
HWL, taxes, rent	8%		
Profit	12%		
Goods/Services	53%	'leaking' outside	53%

In other words, about $0.47 of each tourist dollar remains in the Region after the first round of spending by vendors.

Since the firms which employees and owners of tourist firms patronize have a similar spending profile, one can expect a further 'leakage' of income in subsequent rounds of spending.

A simple tourist multiplier model can be used to translate these relations into the net effect on community income of one dollar of tourist spending.

The model takes the form of

$$A \times \frac{1}{1 - BC}$$

where: A = proportion of tourist spending remaining in Gananoque (and vicinity) after first round spending.

B = proportion of income that local people spend on goods and services in Gananoque.

C = proportion of expenditures of local people that accrues as local income.

For Gananoque it is assumed that:

A = 0.47 (from study)
B = 0.30 (assumed on the basis of other Canadian studies)
C = 0.47 (from study)

Therefore: $$0.47 \times \frac{1}{1 - (0.30 \times 0.47)}$$
$$= 0.47 \times 1.16$$
$$= 0.54$$

There are two values derived from this analysis:

(1) 1.16 is the multiplier which can be used to estimate the total net income of tourist spending.
e.g., for Gananoque for 1974,
\$5 million x 1.16
= \$5.8 million
Tourism 'creates' an additional \$800,000 for Gananoque.

(2) 0.54 is the net effect of each tourist dollar after 'leakages' from all rounds of spending have been accounted for.

e.g., $5 million x 0.54
= $2.7 million
Tourism allows $2.7 million to circulate in Gananoque.

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M.A. QADEER

USE & ALLOCATION OF LAND RESOURCES

LAND RESOURCES OF THE REGION

The primary natural resources of the Thousand Island Region are land and water. The name itself points to the significance of these features (i.e., Islands) for definitional purposes. About 1697 islands strewn along a fifty mile stretch of the St. Lawrence River have endowed this area with unique scenic and physiographic characteristics. The fact that the international boundary between the United States and Canada goes through the mid-stream of the river adds a cosmopolitan colour often requiring criss-crossing from one country to the other in going from an island to an island.

The locational as well as situational features of this area are its main attractions. In this section, we shall examine the present uses of the land resources and analyze public and private influences which lie behind the existing pattern of uses. It is addressed to the analysis of the process of allocation of land resources through the land market and to the identification of institutional variables bearing on this process. The basic premise of this section is that land, particularly recreational land, is the natural resource base of this Region and the economic growth of the area depends on optimal use of this resource. Our discussion of land uses and the prices are meant to illustrate the dynamics of the resource use and are not to be regarded as standard items of a land use study. The significance of this resource perspective will be evident in the later sections of this chapter.

TABLE 4.1: MUNICIPAL LAND AREAS, THOUSAND ISLAND REGION, ONTARIO

Municipality	Area (in square miles)
Wolfe Island	52.27
Pittsburgh	80.62
Howe Island	13.70
Front of Leeds and Lansdowne	82.78
Gananoque	2.74
Front of Escott	43.71
Front of Yonge	50.74
Elizabethtown	128.43
Brockville	7.97
TOTAL AREA	462.96

Source: Census of Canada, 1971.

The Thousand Islands extend over the length of the St. Lawrence River from Kingston (or a little west of it) to Brockville. On the western end, near Kingston, the river starts a long journey to carry waters of the Great Lakes to the Gulf of St. Lawrence. East of Kingston, the islands become more numerous and water, in going around them, forms meandering channels. Near Gananoque and a few miles east of it, under the Ivy Lea Bridge, is found the largest concentration of islands. This is the heart of the Thousand Island area and it is here that tourists converge when they come for boat tours, camping, and cottaging in summer. The density of islands and indentations of the shoreline gradually decrease towards the east and the activities associated with the Thousand Island Region trail off around Brockville. Of course there are other recreational grounds along the river east of Brockville but those are separate activity nodes and are not related to what is commonly called the Thousand Island area. Taking a cue from this spatial spread of the Thousand Islands, we have defined the core region for the land resource perspective of the study to be consisting of the townships fronting on and lying along the St. Lawrence River from the eastern boundary of Kingston to the eastern boundary of Elizabethtown which includes Brockville. (Figure 9) Thus the townships of Pittsburgh, Front of Leeds and Lansdowne, Fronts of Escott and Yonge, Elizabethtown, and towns of Gananoque and Brockville (including the Canadian Islands falling in these jurisdictions) and Howe and Wolfe Island townships constitute the core region for this part of the report.

Nature of Land Resources

Before proceeding to analyze processes of allocation and patterns of use of land resources, the natural features of these resources need to be described. The land resources of the core of the Thousand Island Region can be divided into two parts, according to site characteristics. The shoreline and the islands of the St. Lawrence River constitute a natural recreational resource and a distinct part. The second section is the hinterland which is suitable for the usual rural and/or urban uses, depending upon the demand.

To take the hinterland part of the Region first, it consists of about three quarters of the land area of the core region lying north of Highway 401. This 340 to 350 square mile area forming the immediate hinterland of the St. Lawrence shoreline is a gently undulating plain with contours ranging between 250-275 feet at low points to 375-400 feet at high grounds of the north. A ridge of about fifty feet high precambrian rock runs almost parallel to the river and it divides the shoreline from the hinterland. Highway 401 approximately follows the foot of this ridge and can be regarded as the southern boundary of the upland part of the core region. Apart from the ridge there are a few patches of high ground (375-400 feet), usually rock clusters, near river estuaries and at some points along the shore in Yonge and Escott townships.

Soils of the upland section of the Region have been classified as Napanee clays or rocklands. The clay plains are often of the class 2 and 3 agricultural capability. Around villages and on Wolfe Island are the larger tracts of such agricultural lands. These lands suffer from poor drainage, runoff seepage, and low permeability. Farming in the Region is subject to the same trends as are sweeping across the country, (i.e., decrease in the number of farms and increase in the average size of a farm [Table 4.2]).

The section consisting of the shoreline and islands is primarily disposed to the recreational and water borne uses. The recreational capabilities of the land in this part ranges between class 4 and 5 along the shore and class 3 on the

THE THOUSAND ISLAND CORE REGION

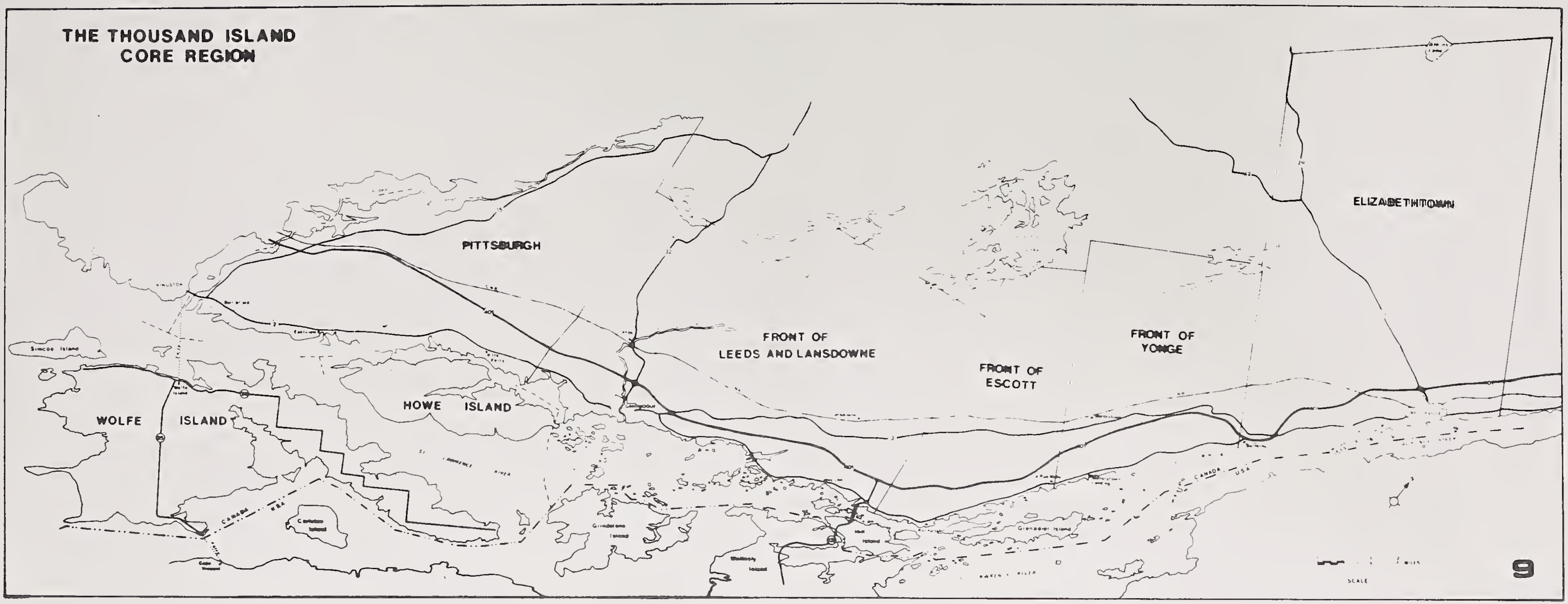


TABLE 4.2: FARMING IN THE THOUSAND ISLAND REGION, ONTARIO, 1971

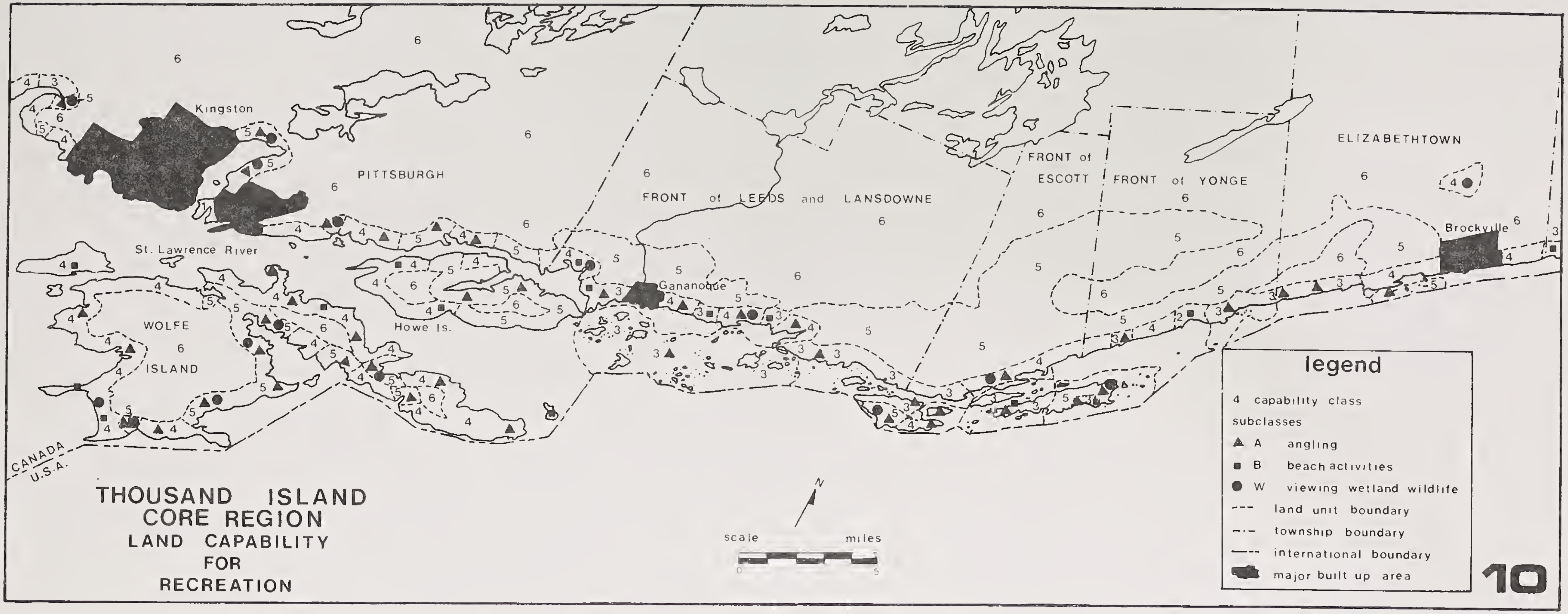
Area	No. of Census Farms			Modal Size of a Farm in acres		
	1951	1961	1971	1951	1961	1971
Pittsburgh	269	218	157	100	100	270
Wolfe Island	170	147	105	100	100	270
Howe Island	43	37	28	100	210	210
Front of Leeds & Lansdowne	350	273	208	100	100	270
Front of Escott	124	92	87	100	160	100
Front of Yonge	151	125	68	100	100	270
Elizabethtown	412	336	260	100	100	100

Source: Census Canada, 1971.

Islands (see Figure 10, Recreational land capability map). Class 4 and 5 lands can sustain low intensity and dispersed recreational uses, whereas class 3 lands are fit for moderately intensive use. What specific uses are naturally feasible on these lands? The Canada Land Inventory maps indicate that this area is primarily suitable for 'viewing' (subclass 'V') and 'family lodging' (subclass 'N') with the exception of a few beaches and inshore bays the area is not suitable for swimming. The swift currents of the river make row boating and canoeing very difficult. On the positive side, the river offers opportunities for angling, speed boating, sailing, and most of all enjoying unique scenic vistas.

There is a mystique about the river and islands which draws tourists and cottagers from afar. The Thousand Islands were a summer watering hole of the rich and influential in the late nineteenth and early twentieth century. At one time, this was almost a summer business capital of the United States. That era has left behind castles, estates, and summer establishments as witnesses to its grandeur. In accordance with the spirit of the post war world, the mantle of the rich has fallen on middle classes. Now cottage owners in the Thousand Islands are typically car dealers, real estate developers, lawyers, and doctors and an odd free lance journalist or painter. The enduring pleasures of the area belong to the affluent (not necessarily rich) and the masses' access to the Region's resources comes in the form of boat tours and camp grounds.

Expenditures required to maintain a complement of boats and docks makes cottaging on the islands the 'hobby of the privileged'. The natural endowment of the Thousand Island Region predisposes them to relatively sedentary recreational uses such as cottaging, scenic enjoyment, cruising, and angling.



THOUSAND ISLAND
CORE REGION
LAND CAPABILITY
FOR
RECREATION

10

Though the islands of the St. Lawrence River are internationally known for their unique beauty, they are not the only recreational grounds of the Region. The five townships constituting the core region have other recreational resources also. The western boundary of the Region is formed by the Cataraqui River and the Rideau Canal. The latter has been extensively 'studied' by the Canada Ontario Rideau Trent Study and has, therefore, not been given primary consideration in this study.

On the northern boundary of the Region, there are a number of lakes supporting substantial cottaging activity. The lower end of Charleston Lake comes down into Front of Leeds and Lansdowne Township. A provincial park at Outlet borders on this lake. In Front of Yonge, Graham Lake has spawned some cottage clusters. The recreational activities of inland lakes bear little relationship to the resources and facilities of the St. Lawrence River shoreline. Apparently the users of inland and shore recreational resources differ in their tastes and demands. Obviously the expense involved in operating a cottage or boat on the St. Lawrence River are higher than those required for inland lakes and consequently 'river people' tend to be better off than the 'lake dwellers'. The Gananoque River is an exception in the sense that it connects an inland lake with the St. Lawrence River. The recreational capability of the land lying along the river is relatively low, i.e., classes 5 and 6. It is suitable for canoeing, angling, and wildlife observation. Cottage development along this river is very limited. All in all, the St. Lawrence River and Islands constitute the main points of recreational and tourist interest in this Region.

Uses of Land Resources

The core region is anchored in two towns on its extremities. In the east, Brockville serves as an employment and service centre and towards the west, Kingston provides a node of urban activities. Being in the Montreal-Toronto axis, the Region lies within two to three hours driving distance of the three major Canadian cities, namely: Ottawa, Montreal, and Toronto, which brings its recreational lands within the reach of about seven million people on the Canadian side. From the United States, residents of the Syracuse, Albany, and Watertown triangle constitute another source of potential users. This means that the recreational resources of the Thousand Island Region would be in considerable demand. It is reflected in the land use.

As previously, we shall examine separately uses of the upland section of the Region and the activities centring on the shoreline and islands. The upland part of the core region is predominantly rural, populated by farmers and workers of Kingston, Gananoque, and Brockville. Elizabethtown and Pittsburgh are, respectively, the recipients of residential spill-overs from Brockville and Kingston, whereas Fronts of Leeds and Lansdowne, Escott, and Yonge remain in the exurban ring surrounding these cities. Generally, residences are dispersed along township roads, usually following an east-west orientation in a strip-like development. There are a few residential clusters in the upland sections and those which can be discerned (as black dots on the land use map) are often built around old hamlets and road junctions. The east-west orientation in the distribution of clusters as well as dispersed residences is very marked. There are a few north-south roads and consequently limited spread of development along this axis. A look at the land use map will show an east-west layered pattern of development wherein successive layers in moving along south-north axis become less sparsely developed. Incidentally this pattern also points out a major problem of land use in the Region; i.e., the development is concentrated in a corridor between the river front and Highway 401 and the interdependencies also operate along the east-west axis. The uplands are sparsely populated and remain outside the main stream of regional activities. Any further development of the St. Lawrence shoreline is likely to exacerbate the situation, unless specific measures are taken to establish north-south linkages.

The shoreline and islands section of the core region presents a number of unique patterns in the use of land resources. The shoreline has a ribbon-like development consisting of residences, summer cottages, motels, and commercial establishments. This is a familiar concept of strip development, except in this case the strip is wider. There is a unique form of strip development in this Region which can be visualized by imagining oneself to be travelling along the shoreline on the river. There is a succession of marinas, cottages, campgrounds, open land, and docks lining the waterfront. In our interviews with the riverfront users, it became apparent that there are occasional conflicts among these uses. Commercial establishments and cottages seem to be most frequently in conflict. Generally speaking, the shoreline is not so developed that it may be called a tourist strip. Stretches of open space are still to be found along the waterfront and there are numerous points of public access. This is further evident from the fact that there were only 1669 cottages (Table 4.3) on the Canadian side of the Thousand Island Region whereas one estimate of similar development on the American side puts the number at 28,000.[1] Table 4.3 provides a breakdown of cottages and residences along the shore by townships.

The shoreline segment of the Region is a narrow strip of land which is laterally crossed by two major highways and a parkway.

TABLE 4.3: NUMBER OF WATERFRONT AND OTHER PROPERTIES IN TOWNSHIPS IN THE THOUSAND ISLAND REGION, 1974

Township	Commercial Estab.	Industrial Estab.	Farms and Farmland Parcels	Farm Houses	Residential Land Parcels	Family Homes	Multiple Residences	Commercial Land	Waterfront Land Parcels	Cottages
Pittsburgh	5	4	101	107	106	623	--	3	44	136
	(9)	(9)	(213)	(259)	(187)	(1210)	--	(2)	(68)	(240)
Front of Leeds and	57	0	67	106	90	386	--	7	251	608
Lansdowne	(94)	(1)	(283)	(345)	(165)	(797)	--	(11)	(288)	(682)
Front of Escott	19	--	19	24	51	149	--	--	130	218
	(24)	(0)	(84)	(101)	(65)	(212)	--	--	(132)	(221)
Front of Yonge	18	--	76	113	105	312	--	2	36	123
	(20)	--	(111)	(163)	(123)	(352)	--	(3)	(65)	(203)
Elizabethtown	49	4	77	88	172	659	39	6	56	217
	(93)	(6)	(330)	(456)	(334)	(1326)	(39)	(18)	(56)	(217)
Wolfe Island		Properties have not been differentiated by waterfront.								
	(3)	(1)	(171)	(175)	(13)	(225)	--	(6)	(109)	(236)
Howe Island		Properties have not been differentiated by waterfront.								
	(28)	--	--	(40)	(2)	(14)	--	(1)	(54)	(131)
TOTALS:										
St. Lawrence waterfront	148	8	340	438	524	2129	39	18	517	1669
All properties	(271)	(17)	(1192)	(1539)	(889)	(4136)	(39)	(51)	(767)	(1930)

Source: Ontario, Assessment Census, 1974.

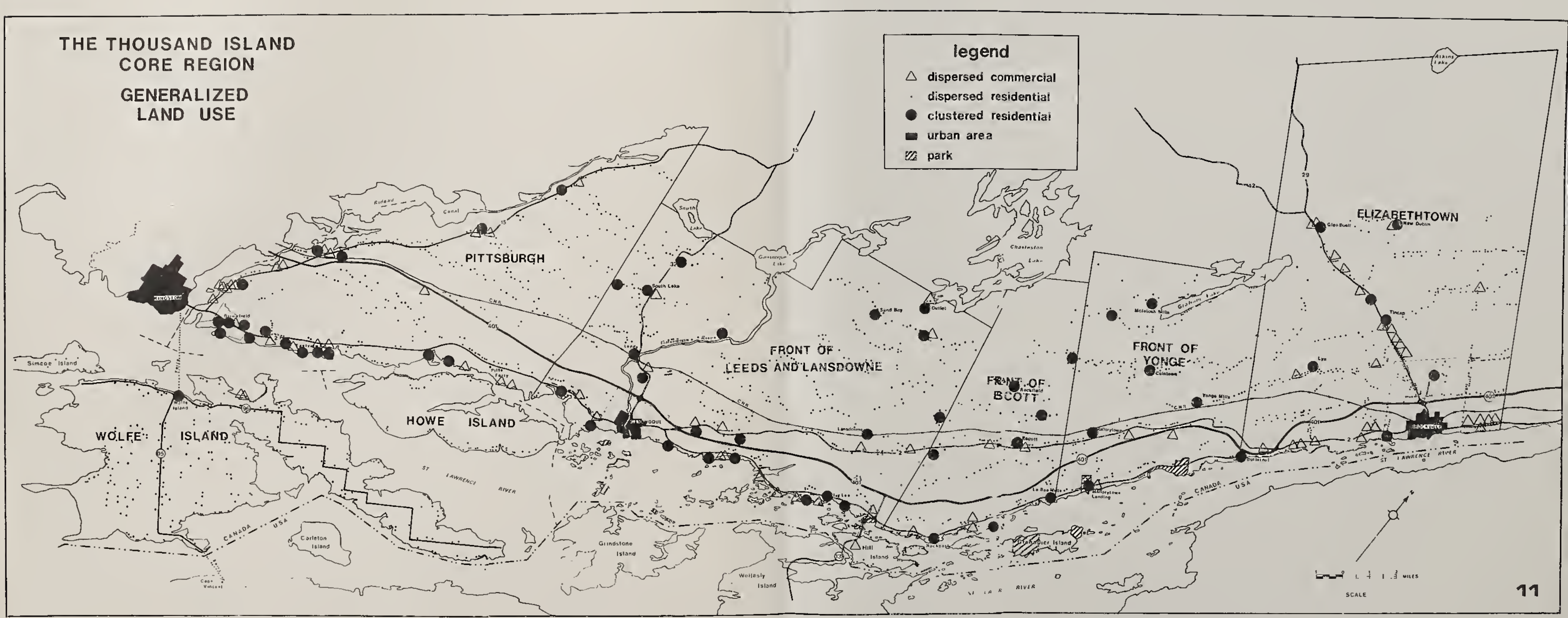
NOTE: The figures for properties in St. Lawrence Waterfront are based on the data about the polling subdivisions fronting on the river. It is usually a band of territory about one concession deep. Totals for all properties for each township are given in brackets.

These features make it very accessible to Kingston and Brockville. Many households have discovered the advantages of combining their 'recreational location' with the permanent residence and have either built houses or winterized cottages for year round use along the shoreline. A number of residential subdivisions and clusters of houses has also appeared. (See Figure 11, land use map.)

There are three main areas of residential concentration, namely: (1) east of Kingston in Pittsburgh township, consisting of expensive subdivisions, (2) between Gananoque and the Ivy Lea Bridge comprised of subdivisions and converted cottages, and (3) in Elizabethtown both east and west of Brockville along Highway No. 2, formed by residential and commercial clusters. The shoreline and islands section of this core region has relatively few commercial establishments, i.e., 151 excluding Gananoque (Table 4.3). A number of these establishments operates only in the summer months. It seems Gananoque has served as a consolidating force in gathering together much of the commercial and service activities and thus preventing their dispersal along the waterfront.

On overlaying recreational capabilities and land use maps, it was observed that clusters of cottages and houses tend to appear on lands jutting out into the river or in areas close to beaches and angling sites. It must be borne in mind that the shoreline and islands are almost invariably classed (N)--i.e., suitable for lodgements. We also found out that wet lands have remained effectively free from development which is as much a reflection of the environmental sensitivity of developers as the relative abundance of suitable land for waterfront uses. Presently, cottages and residences are not a great barrier to the public access of the shoreline. The St. Lawrence Parks Commission has played a very commendable role in acquiring and developing large segments of the shoreline and a few islands for public use. The situation might change and greater public involvement may be required if the appropriation of waterfront lands for private use proceeds at accelerated rates.

Islands of the St. Lawrence River constitute a very unique recreational resource. They are rated as Class 3 by Canada Land Inventory (except larger islands, i.e., Wolfe and Howe which are 4 and 5 generally) and are suitable for angling and lodging uses. Wolfe Island, the largest in the Region, is a thriving agricultural community. It has 236 cottages mostly concentrated on the north side of the narrow eastern peninsula. Howe Island has about 131 cottages and a few farms. These two islands are connected with the mainland by ferry services. The rest of the islands are only accessible by private boats, except for Hill Island which is connected by a bridge. There are small cottage clusters on medium sized islands such as Hill, Stave, Downie, and Lynedoch. These islands have a doughnut pattern of development, their shorelines being dotted with cottages and their central parts lying vacant. Small islands capable of supporting a house or two are prized possessions. Island cottagers also need docking facilities and other shore services. This linkage of land uses on the islands and the shoreline generates transportation demands and necessitates public investment in the necessary infrastructure. How these features of land resources are assessed in the market is a question to which we will now turn our attention.



THE THOUSAND ISLAND CORE REGION

GENERALIZED LAND USE

THE REGIONAL LAND MARKET

Land Prices

To assess the market value of the regional land resources, the sales data of all parcels of vacant land sold during a year (Nov. '72 - Dec. '73) were analyzed. This analysis basically shows the market evaluation, the utility of various sites, and the preferences of the users. The pricing mechanism operating in the market also performs the function of distributing uses over various land parcels. Land price is both an indicator of the private utilities associated with land and a mode of allocating uses. Prices in a land market are set by a myriad of forces, including public controls and facilities, and are not merely the equilibrium point between the demand and supply--as classical economics suggests.[2] The demand for land is a derived demand.[3] It is a reflection of the demand for housing, commercial sites, recreation, etc. Similarly, supply is not purely a function of the prevailing prices. Land uses are relatively immobile and enduring. Ownership is often divided among family members and public regulations increasingly inhibit conversion of land from one use to another. These conditions generate rigidities of the supply. Thus, the choice of land parcels which come on the market and the prices placed on them reflect a variety of public and private decisions whose scope goes much beyond the normal conceptions of demand and supply.

Before describing the distribution of regional land prices, we will briefly outline the procedures followed in the collection and analysis of data. The information on land sales for the year 1973 (more accurately Nov. '72 - Dec. '73) obtained from Teela Market Reports is the primary source of data on land prices. This information was supplemented with the data about the area, location, and distance from nearby cities, villages, highways and waterfront for each parcel of land. The latter information was drawn from assessment files and from highway maps. The data is relatively more complete for the townships of Pittsburgh, Front of Leeds and Lansdowne, Escott and Yonge and Elizabethtown; whereas Wolfe and Howe Islands had few sales which did not yield enough data points to perform various statistical tests. Gananoque and Brockville are towns with relatively independent land markets, therefore those were not included in the analysis, though averages were computed for Gananoque. These disparities in the amount and level of data available for various townships and cities have necessitated a more thorough statistical treatment of the data from the five townships and a descriptive analysis of the information pertaining to Gananoque and Wolfe and Howe Islands.

A meaningful way to present the land price data for such a large area (462 square miles) with diverse site and locational characteristics is to tabulate it by townships and uses. The term 'use' here only refers to the potential use of land as determined by the county assessors. It is not the zoned use, nor is it the existing use in every case. It reflects the judgement of assessors as to what could be the highest and best use of a piece of land in 1973.

The overall average price per acre for land parcels assessed to be suitable for waterfront oriented uses (cottages, etc.) was \$8,275 in 1973 (Table 4.4). The township of Front of Yonge had the highest average price (i.e., \$12,839) and relatively large variation of prices around the mean as evidenced from its standard deviation (\$17,138) and coefficient of variability $(\frac{s}{\bar{x}} = 1.33)$.

TABLE 4.4: PRICES OF LAND ASSESSED FOR WATERFRONT USE, THOUSAND ISLAND REGION, ONTARIO, 1973

Area	Mean Price per acre	Standard Deviation
Pittsburgh Township	$ 5,570	$ 6,580
Front of Leeds and Lansdowne	9,630	5,802
Front of Escott	7,151	4,494
Front of Yonge	12,839	17,138
Elizabethtown	5,244	4,128
TOTAL:		
Five township areas	8,275	7,404
Wolfe Island	2,477	-----
Howe Island	5,749	-----
Gananoque	-----	-----

Source: Teela Realty Sales Review, 1973.

Townships of Pittsburgh and Elizabethtown had the lower prices, i.e., mean being $5,570 and $5,244 respectively. These townships have some suburban characteristics since they are neighbours of Brockville and Kingston. Obviously the prices were higher in the three townships lying in the middle. Wolfe Island's relatively low prices reflect its plentiful supply of waterfront land and relative remoteness from the centre of the Thousand Island Region. What comes as a surprise is the high price of land in Yonge township. The recreational capability of Yonge township waterfront is not much different from the rest of the Thousand Island Region (Class 3 suitable for scenic views and angling). By lacking islands, Yonge township waterfront might be a bit less interesting than the land in Leeds and Lansdowne, for instance. These features add to the puzzle of the high price of waterfront land in Yonge township. We can offer only some tentative explanations about this situation. A large part of Yonge township's shoreline has been appropriated by the Thousand Island Parks Commission as a camp site. This has diminished the supply and consequently might have raised the prices. To remove any doubts about these observations--which could have resulted from some quirk in assessors' designation of waterfront properties--the prices have been cross-tabulated with the physical location of a site on waterfront or otherwise (Table 4.5 shows that on the whole the land located on the waterfront commanded prices [$10,777] twice as high as the land not on the waterfront [$5,013]). Most of the observations recorded earlier are upheld by this Table. Yonge township's waterfront lands had the highest average prices ($16,129 per acre) in the Region with equally wide variation of prices around the mean (standard deviation is 1.79 times mean). Townships of Pittsburgh and Leeds and Lansdowne follow closely behind Yonge in average prices ($11,841 and $11,134 respectively) but they show a relatively homogeneous market with standard deviations not much more than the means. Prices of Elizabethtown's waterfront land were a

TABLE 4.5: LAND PRICES OF WATERFRONT AND NON-WATERFRONT LOCATIONS, THOUSAND ISLAND REGION, 1973

	Land located on the waterfront		Land not located on the waterfront	
Township	Mean Price per acre	Standard Deviation	Mean Price per acre	Standard Deviation
Pittsburgh	$11,841 (20)*	$12,898	$7,007 (35)*	$12,341
Front of Leeds and Lansdowne	11,134 (23)	13,687	3,549 (51)	9,736
Front of Escott	5,883 (9)	4,681	2,258 (10)	5,843
Front of Yonge	16,129 (10)	28,966	4,384 (18)	8,736
Elizabethtown	4,286 (6)	3,286	5,464 (97)	13,865
TOTAL:				
Five townships	10,777 (8)	14,377	5,013 (211)	12,017

Source: *Teela Realty Sales Review*, 1973

Note: * Figures in brackets indicate number of cases.

little less than those for the residential land which confirms the observation that suburbanization of the township and the subdivision developments make an area unattractive for recreational uses.

Serving as an ex-urbia for Brockville, Yonge township was apparently attracting relatively expensive, estate-type housing. There seems to be more residences being built on Yonge's waterfront than cottages. This peculiarity of expensive residential demand preference interacting with a limited supply might have caused the high land prices (Tables 4.4 and 4.5) in Yonge township. This explanation was affirmed by the informed observers of the local land market and it was further indicated that the absence of any controls (zoning, etc.) in Yonge township made it particularly desirable for individual house development. If this explanation is true then it presents a public dilemma. Here is a situation where 'free market' becomes a scarce good and acquires a higher value in contrast to the controlled land market of the neighbouring areas. Do the high land prices in Yonge represent a 'rent' for the absence of public controls? This interrogative statement is the answer emerging from the opinions of the local land market observers.

Table 4.6 shows that residential land prices in the Thousand Island Region varied widely in 1973. The average price per acre of residential land for the five townships was $8,492 and it ranged from $1,229 for Front of Escott to $13,646 in Pittsburgh township. The land prices are not only high in Pittsburgh township but they show relatively small dispersion around the mean (standard deviation is only 1.03 times the mean or in other words, co-efficient of variability was 1.03). This suggests a relatively uniform price distribution which is an indication of a mature market. It is not a surprise to find Pittsburgh's residential land prices to be the highest in the Region. The township has a large defence establishment and is

TABLE 4.6: PRICES OF LAND ASSESSED RESIDENTIAL, THOUSAND ISLAND REGION, ONTARIO, 1973

Area	Mean Price per acre	Standard Deviation
Pittsburgh	$13,646	$14,654
Front of Leeds and Lansdowne	7,835	18,875
Front of Escott	1,229	1,047
Front of Yonge	9,664	21,677
Elizabethtown	6,775	15,603
TOTAL:		
Five township areas	8,492	16,269
Wolfe Island	2,000	-----
Howe Island	4,418	-----
Gananoque	11,982	-----

Source: Teela Realty Sales Review, 1973.

increasingly receiving the overspill from Kingston. Elizabethtown's residential land market had wide fluctuation in prices as evidenced from the co-efficient of variability $\left(\frac{s}{\bar{x}}\right)$ which equals 2.3.

Though the mean price in Elizabethtown, also a suburban area, was a low $6,775, it was higher than the price for the waterfront land which indicates a certain degree of use specialization in various sub-markets. Wolfe and Howe Island's residential land prices were lower than cottage-use land (compare Table 4.4 with Table 4.6). Front of Yonge retains a sort of lead in high land prices even in the residential sector; with a mean price of $9,664 per acre and a standard deviation about 2.24 times the mean, the residential land market in Front of Yonge was operating at high and varying prices. By plotting land sales dates on a map, it becomes evident that Yonge township's sales activity was concentrated along the Thousand Island Parkway which offers possibilities of residences on or near the waterfront.

There were only three cases of commercially designated land sales which rendered any further analysis pointless and confirmed the observation that commercial activity outside major centres was not so prominent. Agricultural land prices averaged $279 per acre for the five townships (Table 4.7). Pittsburgh and Elizabethtown showed relatively higher prices (i.e., $329 and $386 per acre respectively). Agricultural land prices were in line with the general level of farm land prices in Eastern Ontario.

Buyer's Influence in the Land Market

There is a general belief that the proverbial 'doctors and lawyers' from Montreal, Toronto, and New York are raising land

TABLE 4.7: PRICES OF LAND ASSESSED AGRICULTURAL, THOUSAND ISLAND REGION, ONTARIO, 1973

Area	Mean Price per acre	Standard Deviation
Pittsburgh	$329	$301
Front of Leeds and Lansdowne	192	321
Front of Escott	82	71
Front of Yonge	125	69
Elizabethtown	386	687
TOTAL:		
Five townships	279	472
Wolfe Island	174	---
Howe Island	189	---

Source: Teela Realty Sales Review, 1973.

TABLE 4.8: BUYERS' ADDRESSES AND PRICES, THOUSAND ISLAND REGION, ONTARIO, 1973

Buyers' Addresses	Number of Buyers	Percentage	Mean Price per acre
Residents of the Thousand Island Region	212	75.9	$7,148
Residents of Ottawa, Toronto, Montreal triangle, excluding Thousand Island Region	45	16.1	4,286
Residents of other Canadian Provinces	8	2.9	1,000
Residents of the U.S.A.	10	3.6	3,676
Others	4	1.4	9,423
Total: Five townships	279	100.0	-----

Source: Teela Realty Sales Review, 1973.

prices in prime agricultural areas by outbidding indigenous buyers. This introduces the 'opportunity cost' of finances (for prospective buyers) as a determinant of the market price. Also the issue of the foreign (American) ownership of prime lands has surfaced with the increasing national consciousness about maintaining control over Canadian resources. These issues prompted us to cross-tabulate land prices with the address of buyers. Table 4.8 shows that an overwhelming proportion (75.9%) of buyers in 1973 were residents of the area and they paid the highest prices ($7,148) on the average. This fact corresponds to an earlier observation that the land is being put to residential or rather estate cum recreational use around Brockville, Kingston, and Gananoque. There is also a certain amount of convergence of retired persons to the area for residential purposes. Foreigners constituted a very small segment of land buyers in 1973 (3.6%) and they were not outbidding indigenous buyers. Of course this observation should be interpreted with caution. Our data are cross-sectional in nature. There are many foreigners owning properties, particularly in the islands, perhaps for a long time. A limited examination of the assessment records of the cottage owners' addresses revealed that about 37% cottages were owned by Americans.[4] American ownership seems to be especially concentrated on islands. Apparently Americans might have ceased to be very active in the land market of the Thousand Islands in 1973--a trend which has further gained momentum with the introduction of Ontario's foreign land ownership tax.

PATTERNS OF LAND RESOURCE PRICES

On superimposing a map of land prices over maps of land uses and recreational potentials, the following interrelations could be observed.

1) Land prices were highest along Highway 2 and the Thousand Island Parkway. To the north of this ridge of high prices, there was a precipitous drop in values, confirming the role of shoreline corridor as the area of high developmental activity.

2) The price-scape was not uniformly flat over the hinterland. There were sharp and narrow peaks of prices around established villages (Lansdowne, Mallorytown, Leeds, etc.) indicating premiums placed on residential land in these clusters.

3) Along the shoreline, clusters of high prices coincided with major residential/cottage subdivisions which usually occurred on small peninsulas offering a very scenic vista and docking facilities.

4) The bigger islands did not command high land prices, unless accessible by road which is the case in Hill Island. (Prices ranged $121-$18,000 per acre.) The waterfront of medium sized islands which offered possibilities of small subdivisions ranged in price from $1,500-$4,000 per acre. Islands suitable for an exclusive use commanded prices in the range of $5,000-$7,000 per acre.

DETERMINANTS OF LAND PRICES

We have observed some patterns in the distribution of land prices and have identified physiographic and site features correlated with different price levels. So far the locational characteristics influencing land prices have not been given attention, though the land value theory postulates these as the determinants of land prices. From the theorem of inverse relationships between the rent and the distance (from activity nodes), we can derive a number of operational variables as determinants of land prices.[5] These variables consist of distances measured along roads and other paths of accessibility from nearby cities and villages (which are hierarchical activity nodes), highways, and physical amenities, such as waterfront, to a lot. These measures have been treated as independent variables and regressed upon land prices to test their influence in determining and differentiating prices. The data on the corresponding values of locational variables were generated by plotting each land sale on a regional map and measuring off various distances, etc. The results of regression analyses are presented in Table 4.9. As column headings, the Table shows ten independent variables which were treated as determinants of land prices (the dependent variable) and presents results of multiple regression analysis for the core region as a whole and for each of the five townships separately.

A glance at the column showing R^2 values would indicate that independent variables explain a relatively small percentage (16%-48%) of variations of Y values; the regression equation which has a high R^2 (.73) value for Yonge township proved not to be significant with the given F value which means that the fit

TABLE 4.9: MULTIPLE REGRESSION OF LAND PRICES (y) ON SELECTED LOCATIONAL AND SITE VARIABLES (X_i---X_n), THOUSAND ISLAND REGION, ONTARIO

AREA	N	CONSTANT	X_4 Size of Lot	X_7 Distance from River	X_8^+ Waterfront	X_9 Distance from Waterfront	X_{10} Distance from 401 Highway	X_{11} Distance from any Highway	X_{12}^+ Front on Paved Road	X_{13}^+ Access to County Road	X_{14} Distance from nearest village	X_{15} Distance from nearest town	R^2	F
Five Townships	279	6781.70	-0.1349*	-0.1258	0.0811	-0.1780*	0.1792*		0.1016	0.0868	-0.1349*	-0.1317*	0.165	5.926*
			(5.009)	(1.751)	(1.206)	(6.067)	(3.894)		(1.420)	(1.025)	(5.009)	(3.965)		
Pittsburgh	55	23475.73	-0.3303*	-0.3139	0.0515	0.1242	0.3754*	-0.0573	0.2507		-0.5124*	-0.2766	0.486	4.740*
			(5.171)	(1.826)	(0.105)	(0.264)	(7.115)	(0.070)	(3.877)		(9.903)	(2.267)		
Front of Leeds and Lansdowne	74	-1528.44	-0.1557	-0.3475	0.1521	-0.2621	0.3813	-0.1509	0.3880	-0.0709	0.1267	0.01632	0.357	3.500*
			(1.784)	(1.538)	(1.118)	(1.828)	(2.943)	(0.413)	(2.597)	(0.133)	(0.741)	(0.0126)		
Front of Escott	19	21196.77	-1.4284*	0.7813	-1.3262*	-1.7051*	1.7568*	-1.1834	-0.315	0.2509	0.5338	-0.5602	0.733	2.202
			(5.176)	(0.494)	(6.717)	(7.781)	(8.715)	(1.541)	(0.426)	(0.412)	(1.693)	(2.527)		
Front of Yonge	28	23095.97	-0.0839	0.6106	0.1049	-0.4420	-0.4890	-0.2490	0.4969	-0.3479	0.2195	-0.1885	0.279	0.659
			(0.097)	(0.462)	(0.112)	(1.642)	(0.227)	(0.059)	(2.271)	(0.370)	(0.055)	(0.445)		
Elizabethtown	103	5415.25	-0.0774	0.0857	-0.1437	-0.1509	0.0852	0.0578	-0.0496	0.2315	0.2258	-0.2470	0.180	2.029*
			(0.575)	(0.052)	(1.838)	(0.630)	(0.077)	(0.155)	(0.156)	(3.183)	(3.423)	(1.307)		

NOTES: Upper figure in each cell is Beta co-efficient
Lower figure (in brackets) is F. value

* Significant at 5% level
+ Are dummy variables

of the estimating least squares equations could have occurred by chance. These observations alert us to a possible inadequacy of the postulated variables as the determinants of land prices at a regional scale. For the Region as a whole, only 16% of variation could be explained by the ten independent variables.

Among the land submarkets comprised of individual townships, Pittsburgh comes closest to being explained by the postulated variables (48% of the variation of prices explained at the 5% level). It might be noted that this is a suburbanizing township whose proximity to Kingston makes it more amenable to influences reflected by the independent variables. At the regional scale, the significant influences on prices are lot size (X_4), distances from Highway 401 (X_{10}), nearest cities (X_{14}), villages (X_{15}), and waterfront (X_9). The signs in the equations are right with the exception of distance from Highway 401 (X_{10}). In Pittsburgh, the significant price determinants are distances from the nearest village (which really reflects a first order node of commercial activity) and the lot size. Other townships present a contradictory picture.

Front of Leeds and Lansdowne and Elizabethtown have significant (at 5% level) R^2 values, but none of the independent variables individually stand out at an acceptable level of significance. Whereas Escott has some individual variables showing right signs and adequate level of significance but the R^2 value is not significant. Front of Yonge's multiple regression equation shows no acceptable level of significance for either the individual variables or the total R^2 thereby indicating that the postulated variables were behaving randomly.

Overall, the results of the regression analyses have added little to explain the variation of land prices. On the other hand, the analyses provide a negative canon for the desired explanation. Obviously the influence of accessibility variables diminish at a regional scale and in a rural setting. Given a network of highways, the 'desirability' of one location over another is not determined by accessibility alone, because it matters little whether one travels ten miles or twelve miles to a job. However, sites not accessible by road or located on an unpaved road are another matter. They are so lacking in accessibility that a pronounced difference in prices appears (Table 4.10). Such sites are usually used for agricultural purposes. Once the threshold of accessibility is attained with the availability of a metalled road, variation of distances seems not to be related to the land rent and hence prices. Incidently, there is an 'urban bias' in the land value theory with obvious emphasis on the 'cost of distance' but in a rural setting this cost is not so high and hence is without much effect on land values. Even in small towns, where travel times are insignificant, the land value theory seems to be inapplicable. For Gananoque, a regression test using land price as the dependent variable and distances from the Central Business District, St. Lawrence River, and Gananoque River as the independent variables was performed. The results showed poor and insignificant correlation and yielded an insignificant multiple R^2 (.26).[5] This further demonstrates the inappropriatness of the current land value theory to non-urban regions and small towns.

What characteristics lend high (or low) values to land? This question may seem to have remained unanswered on account of poor regression results, yet it is not entirely so. We have provided some answers in earlier sections. It was found that high price land was concentrated in the shoreline corridor along the river. Lots within residential/recreational clusters were high priced and so were the sites commanding good views and located on peninsulas. We further observed that there were submarkets whose dynamics of demand and supply determined price levels, e.g., Yonge township. The core region seems to be attractive to a very specific set of demand preferences: a combination of residential-recreational facilities and low

TABLE 4.10: LAND PRICE AND LOCATION ON A PAVED ROAD, THOUSAND ISLAND REGION, ONTARIO

Located on a paved road	Number	Percentage	Mean Price per acre	Standard Deviation
Yes	178	63.7	$7,352	$15,574
No	101	36.2	4,771	6,722
TOTAL	279	100.0	6,418	13,124

Source: *Teela Realty Sales Review*, 1973.

density development traded off with long commutes. Households supporting this mix of preferences are being drawn into the core region. It is becoming an expensive residential/recreational corridor. These findings can be generalized by pointing out that sociological and institutional factors seem to have strong influences on the land market.

THE DEMAND AND SUPPLY FRAMEWORK FOR LAND RESOURCES

A large proportion of new development in the Region occurs in the waterfront corridor around Highway 2 and the Thousand Island Parkway. This area is the focus of a very specific demand preference, i.e., residential cum recreational uses. The nature of this demand and sources of the corresponding supply need to be investigated. A number of questions arise from this concern: Who are the 'consumers' of these sites? Who are the sellers and what makes them sell? How does information pass between the two parties? What public regulations constrain the markets and how? These institutional factors underlying the land market have determining influences over prices and uses of land. We shall briefly examine some of these issues.

There are very little hard data about these matters. A thorough examination of these issues would require an independent and extensive study. From the limited information available to us, we can merely raise some pointers without promising any conclusive answers.

A larger proportion of land buyers in 1973 were people from the Thousand Island area (Table 4.8). Residents of the Brockville area were active in Elizabethtown and Front of Yonge's land markets and Kingstonians could be found frequently among buyers in Pittsburgh and Front of Leeds and Lansdowne townships. The concentration of buyers around their original (previous) centres indicates that the regional land market was essentially serving suburbanizing households from nearby cities. Most of the buyers appear (from the names) to be individual householders as were most of the sellers--often the deeds were registered jointly in names of husbands and wives which indicates that the buyers intended to keep the properties in their families. There were very few visible corporate buyers (and sellers), unless they are hiding behind a lot of 'front men'. On the basis of these indices it can be surmised that there was little speculation of land, nor were a few individuals monopolizing the market. This observation must be hastily qualified with the caution that our data was cross-sectional in nature, essentially indicative of events for one year only, 1973, and the conclusions based on it are as reliable as the events of one year can be in a market.

A survey of buyers and sellers would have provided some concrete and reliable evidence about the reasons and the negotiating process of these land transactions. The expense of such a survey was prohibitive. Instead, names of buyers and sellers were shown to informed local observers (e.g., township clerks, real estate agents, assessors, reeves, etc.) and they were asked to identify the socio-economic characteristics of buyers and sellers and to surmise about the reasons for a particular transaction. (Undoubtedly this is a crude method of surveying the social background of actors in the land market and the observations derived from it should be regarded as guesses only.)

It seems that a large proportion of sellers were old residents of the area or people who had owned the lots for a long time. Along the waterfront there were relatively more cases of real estate developers selling land but even their operations did not constitute more than 10% of all transactions in any township. Generally speaking, the regional land market is dominated by individual actors who come from the Region itself. Buyers seem to be seeking country residences on relatively cheap rural land or expensive waterfront land where they could combine residences with activities normally associated with cottages.

A nagging question that arises in most land market studies is: What is the demand for land? This question can not be answered neatly because the usual concept of a demand function does not apply in this case. The demand for land is derived from the area-wide demand for housing, investment opportunities, recreational needs, etc. The indices of demand are also the indicators of the supply and they can not be disaggregated, at least empirically. We shall present a few pointers to indicate the trends in house and cottage building activity in the area and show the extent of the land severance activity. From this limited information, one can obtain some idea of how fast or slow this Region is growing.

Table 4.11 shows the total number of residential and recreational building permits issued in three townships for which this data was available. Without unduly burdening this limited data with interpretations, one can observe that the development activity in these towns is not very extensive. On the average, the number of houses and cottages being built per year were forty-eight in Front of Leeds and Lansdowne, fourteen in Front of Escott, and forty-seven in Elizabethtown. In an area of about 300 square miles (the three townships), about 108 houses and cottages per year are not too many. The cottage development is all the more limited. In two townships, Fronts of Leeds and Escott, which are in the heartland of the Thousand Island Region, about seventeen cottages per year are being built--as a rough estimate, one can say that two-thirds of these could be along the St. Lawrence River. These figures,

TABLE 4.11: BUILDING PERMITS FOR THREE TOWNSHIPS IN THE THOUSAND ISLAND REGION, ONTARIO, 1970-1974

Area	1970	1971	1972	1973	1974
Front of Leeds and Lansdowne *	26	48	41	59	64
**	(9)	(14)	(11)	(18)	(9)
Front of Escott	15	10	9	14	22
	(7)	(8)	(4)	(5)	(4)
Elizabethtown		30	54	81	61

Source: Township Offices

Note: * Total number of residential and cottage building permits.

** Cottage permits only are indicated in brackets.

TABLE 4.12: LAND SEVERANCE CONSENTS GRANTED BY LAND DIVISION COMMITTEES FOR THREE TOWNSHIPS, THOUSAND ISLAND REGION, ONTARIO, 1971-74

Area		1971	1972	1973	1974
Front of Leeds & Lansdowne	*	8	9	29	62
	**	(7)	(6)	(14)	(8)
Front of Escott		5	2	5	13
		(5)	(2)	(3)	(9)
Front of Yonge		4	7	6	22
		(5)	(4)	(2)	(7)

Source: Land Division Committee, Leeds and Grenville.

Notes: * Figures show only consents for new residences in the open country and does not include data for residential consents in built-up areas.

** Figure in brackets show consents for cottages.

inadequate as they are, indicate a relatively steady rate of development for the past few years. This is a proxy indicator for the demand (as well as supply).

Another indicator of the land demand and supply is the volume of land severance activity. Table 4.12 reports data for three townships whose consents were being administered by the County Land Division Committee. This data does not include lots created by registered subdivisions or by consents in built-up areas. The decision to present only the information about open-country lots and cottage lots is based on the assumption that these sources of land supply are the major contributors to the strip development and scatteration. The Table reaffirms the observations gleaned from the building permit data. There are more consents for residences than for cottages. In fact cottage consents are few in numbers (about sixteen on the average per year in the three townships) and there is no discernible upward movement in the trend for the four years period.

Residential land remains the main focus of the demand with some evidence of the increasing tempo. Front of Leeds and Lansdowne seems to be an area of accelerating development. Though the number of houses going up per year may not be very large (about forty-eight per year) but the increasing number of residential consents combined with subdivision activity points out a growing developmental pressure in this township. Overall, the rate of annual development of residences and cottages in the Region may not be alarmingly high, but if this rate continues for a decade or so, the cumulative effect would be a very diffused suburban type development. Particularly vulnerable would be the shoreline of the St. Lawrence River which has special attractions as a site for residences. There is a need for public control. This conclusion raises the question of the present role of the public sector in the land market.

PUBLIC INFLUENCES IN THE LAND MARKET

The public sector is perhaps the single most influential force in a land market. Through public decisions, roads and bridges are built; industrial and employment centres are established; police and medical coverage is extended and an institutional framework of allowing (or disallowing) uses of land is established. All these measures determine the potential for development of a parcel of land. In this study, the existing public infrastructure is accepted and we are not dealing with its influences on the land market. Following the convention of land market studies, we will focus attention on the public regulations and controls which directly bear on the use and supply of land.

TABLE 4.13: PREVALENCE OF LAND USE REGULATIONS, THOUSAND ISLAND REGION, ONTARIO, 1974

Township	Building By-law	Official Plan	Zoning By-law
Pittsburgh	yes	prepared	being processed
Front of Leeds & Lansdowne	since 1971	South Leeds area official plan includes these townships under preparation	no
Front of Escott	revised in 1971		
Front of Yonge	revised in 1970		
Elizabethtown	since 1953	for first six concessions since 1953 new official plan prepared	being processed
Gananoque	yes	Official Plan	no
Wolfe Island	no	no	no
Howe Island	no	no	no

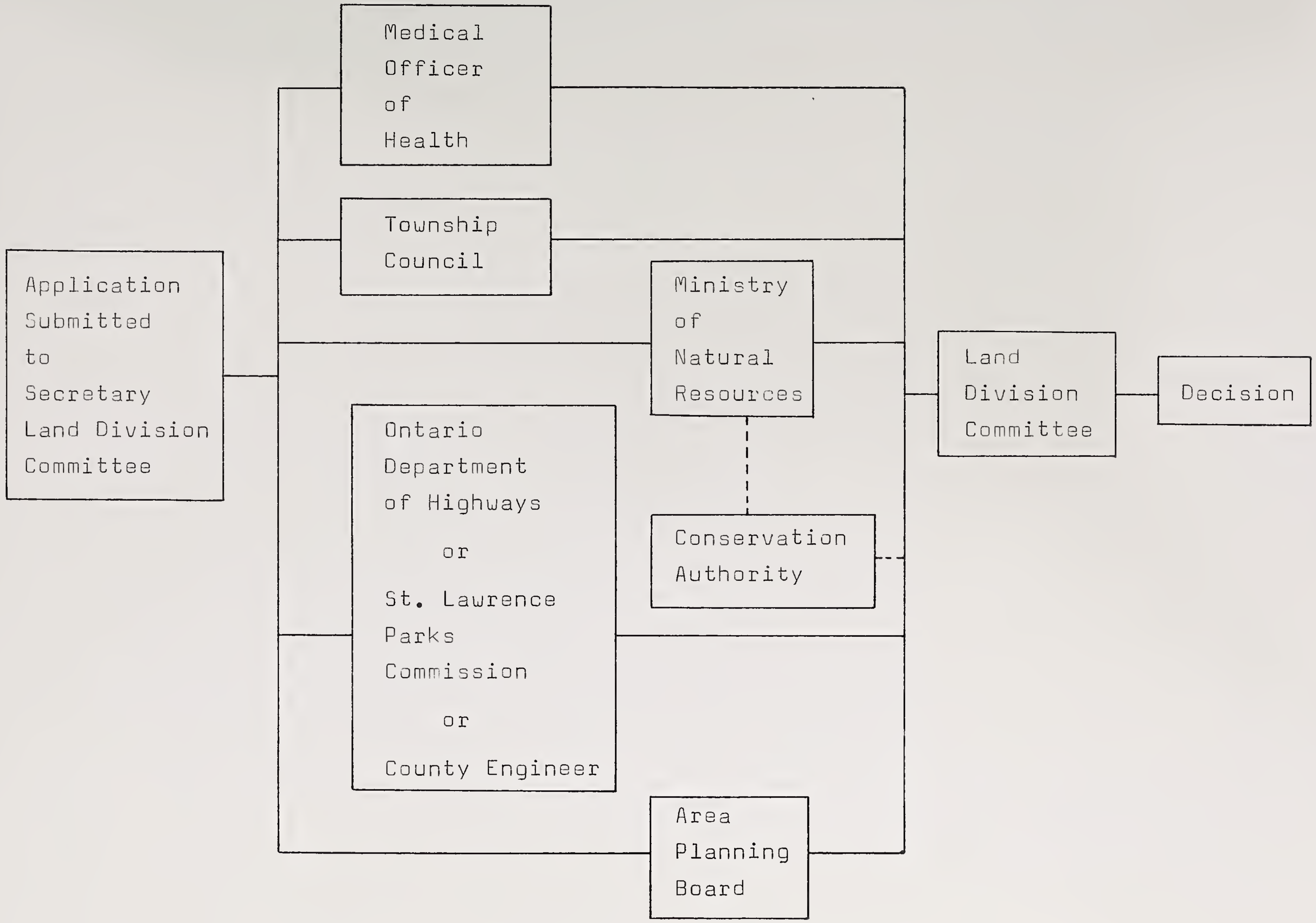
Table 4.13 shows that with the exception of the two island townships, the rest of the Region is covered by building by-laws and will soon have official plans and zoning by-laws for the whole area. The three relatively rural townships Fronts of Leeds, Escott and Yonge would be subject to a sub-regional official plan under the aegis of South Leeds Planning Board. These are conventional public instruments of land use control. The Region will be adequately covered in a year or so by all the known instruments of land use control and this should normally reduce the concern about scattered development that even a steady rate of growth might bring about in a decade.

Undoubtedly official plans will give greater powers to planning boards to regulate the land use, but it should not be construed to mean that the public sector does not play a significant role in the present land market. There are two main sources of land supply presently. The first source is land subdivisions which are highly regulated by the provincial Ministry of Housing. So wide ranging are the consultations in granting of subdivisions that about thirty-eight provincial agencies and twenty local agencies, on the average, are referred to in each case.[7] The second source of land supply is consents. This source is said to have many loopholes by which an individual can get around public controls. And it is said to be the major route to the scattered development. Even consents are regulated under The Planning Act.

In the Thousand Island Region, the townships falling in Leeds County, with the exception of Elizabethtown which operates through a Committee of Adjustment, are subject to the jurisdiction of the County Land Division Committee for granting of consents. The County Committee uses a number of criteria in accepting a consent application. A lot has to conform to minimum size requirements (100' x 155' for cottage lots and one acre for country residences) and its location, access, soil characteristics, and waste disposal potential have to meet with the approval of respective public agencies. Figure 12 shows the typical referral process in granting of a consent. It can be observed from this figure that every consent has to measure up to some technical criteria set by highway, public health, environment, and water resource agencies. The point of this illustration is that the public 'input' (if not strictly control) regulating the supply of land through consents is not unsubstantial. It is therefore inappropriate to say that land market is unregulated if it is not controlled through zoning. Rather the question is how to bring out the positive qualities of land resources in the public interest.

Apart from the regulation of land supply, there are two special public bodies which take initiative in developing and preserving land resources in the Thousand Island Region. They act as promoters and developers of land resources as much as the regulators of land use. The St. Lawrence Parks Commission is responsible for developing, controlling, managing, operating and maintaining parks for recreational purposes along the river. In the area of this study, the Commission is responsible for the development and maintenance of the Thousand Island Parkway (2791 acres), Brown Bay's Park (186 acres) in Front of Yonge, Ivy Lea Park (42 acres) in Front of Leeds and Lansdowne and Fort Henry (36 acres) in Pittsburgh township. In its promotional and regulatory roles, the St. Lawrence Parks Commission has played a very constructive role in preserving public access to waterfront and retaining the feeling of openness along the parkway. National Parks Division of the federal government is the second public agency which has acquired environmentally unique islands and parts of the shoreline to promote a wholesome use of the Thousand Island area's resources. It owns an area of 1.6 square miles out of which about 98 acres are on various islands. The fact that these agencies can acquire land in the public interest has affected the market significantly.

FIGURE 12: ROUTE OF AN APPLICATION FOR CONSENT OF LAND SEVERANCE IN LEEDS COUNTY


Application Submitted to Secretary Land Division Committee
Medical Officer of Health
Township Council
Ministry of Natural Resources
Ontario Department of Highways
or
St. Lawrence Parks Commission
or
County Engineer
Conservation Authority
Area Planning Board
Land Division Committee
Decision

These public influences operating in the land market have contributed to the emerging pattern of resource use. The future is a big question mark: So far the developmental pressures have been relatively limited. Will the cumulative effects of residential suburbanization of the Region and increasing tourism in the area be accommodated within the framework of public interest?

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POLICY OPTIONS AND ISSUES

Eastern Ontario is an economically depressed area. The economic stagnancy is reflected in its demography. It has consistently lagged behind the province of Ontario in the rate of population growth. Within Eastern Ontario, the growth has converged on two areas namely the Ottawa metropolitan region and the Lake Ontario-St. Lawrence shoreline with the Kingston area being the major centre of attraction. Ottawa's momentum of growth, obviously, comes from its unique role as the national capital. What has lent the string of communities from Prescott to Bath the drawing power for growth is a question worthy of attention.

The St. Lawrence River and Lake Ontario shoreline communities are the core of the Thousand Island Region. Our study has assumed four counties, namely, Lennox and Addington, Frontenac, Leeds, and Grenville as the Greater Thousand Island Region particularly from the demographic point of view. We recognize that the northern townships of these counties are not fully integrated economically and socially and do not share the development of the southern parts of the Region. This consideration lies behind the definition of the core of the Thousand Island Region which is assumed to be constituted by the townships fronting on Lake Ontario or St. Lawrence River between Kingston and Brockville. The core region is a functional unit in matters of recreational resources, land markets, and accessibility. This area has commanded greater attention in our study and most of the issues to be discussed in this chapter pertain to the core region.

In the Thousand Island Region, the Canadian National Railways mainline, the Macdonald-Cartier Freeway, and historic Highway No. 2 come together within a few miles of each other in a narrow band of territory paralleling the shoreline. Thus, this area of unique beauty and amenity is highly accessible to three major Canadian cities--Toronto, Montreal, and Ottawa--and is also within driving distance of three American states, namely, New York, Pennsylvania, and Vermont. The islands concentrated in a fifty-mile stretch of the river offer enchanting views and captivating scenery. There are other attractions in the Region such as fishing grounds, swimming beaches, and sailing lanes for sports enthusiasts and restful summer residences for the more sedentary. All these features make the Thousand Island Region an area of national and even international recreational interest. Proximity to the United States enhances the attraction of the Region by adding a cosmopolitan flavour and increasing its potential clientele. An idea of the popularity of this Region with tourists, campers, and visitors can be gained from the following table.

TABLE 5.1: NUMBER OF VISITORS TO PARKS AND HISTORIC SITES IN THE THOUSAND ISLAND REGION, 1970-1974

	Visitors to Fort Henry, Upper Canada Village and all parks run by the St. Lawrence Parks Commission		Visitors to the National Parks run by Parks Canada	
	Total	Percent change over the past year	Total	Percent change over the past year
1970	3,025,295	---	108,346	---
1971	3,141,497	3.8	235,510	117.3
1972	2,584,030	-17.7	203,138	-13.7
1973	2,969,396	14.3	226,271	11.4
1974	3,061,279	3.1	172,526	-23.7

Sources: (i) The St. Lawrence Parks Commission, Morrisburg.
(ii) Parks Canada, Mallorytown.

About three million visits to historic sites and parks take place around this Region every year.[1] Correspondingly, hundreds of thousands take boat cruises around the islands and the number of boaters, sailors, and sport fishermen is also substantial. There are also about 1,700 cottages on the Canadian side and 28,000 on the American side of the Thousand Island Region. This is a very large volume of summer activity concentrated in small communities such as Gananoque and Rockport. Such intensive tourist and recreational activities are both a blessing and a source of local anxiety.

Lest it may be assumed that summer recreation and tourism are the primary activities in the Thousand Island Region, we should mention that historically the Region had considerable commercial and industrial activity, particularly when lake shipping was a viable mode of transportation, and these functions initially spawned communities such as Brockville, Gananoque, Bath and Napanee. They originated as lake and river ports and grew into industrial communities where produce from hinterlands was processed and boats and ships were manufactured. Though many of these activities have disappeared they have been replaced to some extent by modern industrial and service establishments. This segment of the Region's economic base largely determines the growth potential of the area.

Land is the primary resource of this Region. Both its location and its site characteristics make the Thousand Island Region a very desirable area for habitation as well as recreation. A house on the waterfront is both a home and a summer cottage. There is some feeling of freedom in owning an island: one is master of his world. A cottage on the St. Lawrence River is a door to the wide world of the Great Lakes and even the Atlantic Ocean; the St. Lawrence Seaway is at the doorstep. This gives a feeling of expansiveness which a site on an inland lake does not provide. These characteristics make land a unique resource of the Region. The use of this resource will determine the future of the Region as well as of Eastern Ontario. Amenities have increasingly become a prime determinant of industrial and service locations and they are essential for recreational uses. The former activities give a stable economic base to the area, the latter provide voluminous earnings seasonally. Obviously balancing of the two demands is the desirable course in the use of land resources.

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[1] These are visits and not number of persons since a person visiting more than one site would have been counted at each site.

Presently land resources are not being alarmingly misused or misappropriated. In 1973, the average price per acre of waterfront land was $10,777 and in the inland sections the land price was $5,013 per acre. This price level is low by Ontario urban standards and it certainly does not adequately reflect the unique value of the land resources. Yet this is the market price. It seems that the demand for development in 1973 was limited. This fact is further borne out by the building permit data. In the heart of the Thousand Island Region, namely, the Townships of Leeds and Lansdowne, Front of Escott, and Elizabethtown only about 110 permits for cottages and houses were being issued per year on the average in the early seventies. This pace of development is not very threatening in the sense that the unique land resource is not on the verge of being gobbled up by development.

Why is this so? We did not expect to come up with this observation and therefore had not collected data to answer such a question. Perhaps, there are many intervening opportunities for residents of Ottawa, Toronto, and Montreal who could be the main clients for summer residences. And without a vigorous year-round economy, there is little likelihood of in-migration from other areas. These factors might have restrained the demand. But this may be a temporary situation. The 28,000 cottages on the American side are an apt example of what the development could be. The Thousand Island Region might have such a crowded future and if that happens, the area would be more or less permanently given over to seasonal uses.

Some observations about the pattern of land use in the Thousand Island Region have been gleaned from the data of this study. It appears that small peninsulas jutting into the river are premium sites for cottages as well as houses. Interestingly they are also appropriate for 'viewing', the recreational activity most often ascribed to the lands of the Region by the Canada Land Inventory. Also it seems that households prefer relatively sparsely settled sites and are willing to pay higher prices for them. This has created a leap-frog pattern of development along the shoreline. If we were to look upon the waterfront from the lake or river, we would find a linear, strip development. An analysis of waterfront land uses reveals a mixture of activities many of which are incompatible with each other and thus a source of functional and environmental problems.

Even within the limited confines of the core of the Thousand Island Region one finds a sharp cleavage between the waterfront and inland communities in terms of intensity of activities. This north-south dichotomy, economically and socially, is an indication of the meagre interaction between communities in the relatively prosperous shoreline corridor and those to the north. On the scale of the Greater Thousand Island Region or Eastern Ontario, the north-south polarity is all the more striking. Partially this polarity is the result of the shoreline corridor being on the 'main street' of metropolitan Canada, but it has also been accentuated with the declining industrial and agricultural activities which had tied the hinterland and the shoreline together. The tourist and recreation activities of the two areas have few linkages either.

Islands are a special feature of this Region. They offer inspiring scenery and 'views' and unmatched opportunities for recreation. Naturalists, environmentalists, and historians also find them to be of unique value. They support a wide variety of uses and activities. There are bigger islands such as Wolfe, Howe, and Hill which have permanent settlements. Most of the small islands are used for summer residences or picnic and camping grounds. Some have been turned into federal or provincial parks. With gravitation of uses towards the waterfront and the decline of agricultural activities the larger islands resemble a 'doughnut' in their development pattern with the waterfront rim being used for cottages, and the centres lying unused and often inaccessible. It might be mentioned that a juxtaposition of houses, summer residences, natural scenery, and waterforms many times enhances the enjoyment of viewing.

From this broad overview of the present developmental trends some structural features and issues can be abstracted. These are outlined below:

1) The Thousand Island Region is one of the two developmental poles in Eastern Ontario.
2) The Region is a corridor of development along the major railroad and highways with an east-west orientation. North-south links are weak with a consequent disparity in prosperity.
3) Much of the regional growth is concentrated in Kingston and the surrounding townships with some spill over in shoreline communities of Gananoque, Brockville, Augusta, etc.
4) The Region has many unique physical features which make it very attractive for recreational and summer outdoor activities.

5) The waterfront land is the prime resource of the Region. Its amenities, enhanced by the easy accessibility, make this land an economic resource and not merely a territory supporting some economic activities. The land is an essential 'input' in tourism and recreation on the one hand and water-based industrial and commercial activities on the other. The use of waterfront land for one activity reduces the availability of this resource for others. The activities for which land is appropriated determine the economic and social structure of the Region. A balanced use of the land for summer and year-round activities will be a prime concern in the future of this Region.
6) The summer tourist and recreational activities draw about a million to a million and a half people.
7) The land has not been grossly misused and its price for development has been moderate, so far.
8) Prime sites are being appropriated by subdivisions and cottages and there is a certain degree of strip development along the shore.
9) The shoreline uses have developed without any thought to their interrelations. There is an unmindful mixture of uses, some compatible and others not so compatible, on the shoreline (e.g., houses next to marinas).
10) Islands have a variety of activities. The non-use of the land at the centres of large islands and appropriation of small islands for individual uses may become serious problems in the future.

These issues will be discussed in the next section under four major policy headings. It must be realized that there are a number of interest groups whose objectives are often tangential to each other. The federal government is the custodian of the national interest in maintaining the uniqueness of the area and preserving its historical and environmental characteristics. It also has an interest in the regional economic development. The provincial government is responsible for many local services and facilities and has a direct interest in promoting rational land use. Municipalities of the area look after their community interests. Property owners are another interest group and seasonal users of parks and islands constitute an interest group with distinct demands. Constraining and regulating all these interests is the public interest. The point of this brief description is that there are no well-defined objectives to guide the development of the Region and any exercice in policy making has to take into account those divergent interests. Perhaps a desirable approach in policy making is to establish parameters within which those interests can co-operate as well as compete. In pursuit of such a frame of reference, the concluding section of this study will identify policy areas and suggest some choices under each heading.

POLICY ISSUES AND OPTIONS

From the overview above emerge four key issues for the future development of the Thousand Island Region. These are:

1. Strengthening the economic base of the Region;
2. Maintaining a balance between public and private interests in the use of the Region's islands and waterfront;
3. Establishing an optimum level of tourism and recreation in the Region; and
4. Developing a viable planning process encompassing both local and regional interests.

There are few unique solutions for any of these issues for, despite its apparently diverse nature, there is a high degree of interrelationship among the various parts of the Region. Thus, a solution for the economic base affects tourism, the role of urban centres, the use of land resources, and local planning. These relationships show up in our brief discussion of each issue below. They bear out our original contention that this is, indeed, a region and its future development should be considered only in this light.

Strengthening the economic base of the Region

The Thousand Island Region's economy has four substantial sectors: manufacturing, tourism, agriculture, and trade and service. However, each one suffers from a 'lack of depth' due to their seasonality and/or dependence upon other regions for raw materials. In addition, there is little integration among the various parts of the economy and among the communities housing them. Thus, there is a condition of a number of 'independent' economies and economic areas, such as Rockport, Lansdowne, and Gananoque.

If further economic development is desired for the Region, it should stress activities that will strengthen the links vertically within sectors and spatially between centres. The options for making stronger vertical links lie in such things as tourist activities that increase the stay of visitors (e.g., a festival) and provide a wider range of activities (e.g., entertainment) thereby supplying a more substantial economic base upon which subsidiary activities to tourism could be established.

As we noted in discussing tourism in Gananoque, there are substantial 'leakages' of the income attracted to the Region. The situation is hardly different for any of the other economic activities. In order for the Region to retain more of its income it will be necessary to develop more of the suppliers of goods and services to tourism, manufacturing, and agriculture right within the Region.

Spatial linkages could be strengthened by promoting the distribution of various subsidiary activities among different centres of the Region. Wholesaling, business services, and commercial activities might be distributed to strengthen individual centres and the interdependence of all parts of the Region. One other strategy that might be applied consists of promoting 'tour circuits' to link the amenity resources of the interior of the Region, the Rideau Lakes area, with those of the St. Lawrence and Islands area. Combined water and land transport and overnight stays at interior resorts could do much to exploit more effectively all of the Region's tourist and recreation resources as well as promoting the presently ill-developed north-south integration of the Region.

Conversely, policy options which serve only to expand the number of visitors should be critically questioned. Tourism, as we have seen, has a low multiplier effect on regional income under present conditions. Moreover, there is evidence of land and water resources of the Region already being under stress with today's large number of visitors.

Maintaining a balance between public and private interests in the use of the Region's islands and waterfront

Balancing of public and private interests in the Region's prime lands is not merely a matter of determining of respective characteristics of the two types of uses. It is a multi-dimensional issue. As suggested earlier, the land is an economic resource of the Region. Its allocation will determine the social and economic future of the area. A balanced allocation of this resource requires that consideration be given to the following issues:

a) year-round vs. seasonal activities;
b) public vs. private access;
c) passive vs. active uses; and
d) concentrated vs. dispersed patterns of use.

The year-round activities, such as industrial, commercial, and residential, give continuity and solidity to an area, whereas seasonal activities allow a greater use of an area's natural endowments by the provincial and national clientele and produce economic returns which become significant in the absence of a vigorous economic base. Obviously a judicious mix of the two types of activities is in the best interest of the Region.

The second dimension, public vs. private access, poses a very emotional dilemma. To what extent should the private use of unique amenities be at the expense of the public-at-large? This question becomes very tangled when the demand for public use is not very strong. In such a case an excessive allocation to public use appropriates resources for activities of a low demand. Whereas an unrestrained market which appropriates the land for private use is likely to reduce the general public's opportunity to benefit from the Region's unique features. So far the private demand for houses and cottages has been moderate. Currently, there is enough land to accommodate both types of preferences, but the choicest sites on peninsulas, for example, are being appropriated for private use. This means that public access and use may remain possible for a while in the future but it may be limited to those parts of the waterfront which are less desirable. The qualitative aspect of sites available for public access becomes all the more important if it is realized that 'viewing' is the prime recreational use suggested for the Region. The public access to islands implies some public transport which is presently absent. Without water taxis or other means of transport, islands remain inaccessible, even when made into public parks.

To distinguish between passive and active use, we have to reiterate the significance of natural scenery as the Regional asset. For a vast majority of visitors viewing is the main recreation. This is a passive use requiring access to appropriate vantage points. Other passive uses are marshes, estuaries and bird sanctuaries which need to be left relatively undeveloped both from environmental and aesthetic points of view. They also serve as hunting and fishing grounds. On the other hand, activities requiring changes in the site characteristics or construction of structures often generate active uses. An appropriate balancing of the two types of activities has to be established.

Problems of incompatible mixture of uses on the waterfront have already been discussed. This requires segregation of various uses by buffering them from each other through interspersed passive uses. To determine the relative demands and suitability of various sites requires an intensive study. Presently it is enough to draw attention to this dimension.

Concentration of inter-linked activities at selected sites conserves land resources and enhances their combined effect on the local economy. This is the basis of community formation. The Thousand Island Region has historically thrived on the strength of a few centres and villages. Recent development has taken the form of the usual suburbia--a low density sprawling pattern of growth. Such a development blocks public access to the waterfront and often wastes precious land resources. Public interest as well as the prerequisites of a viable community organization requires consolidation of development in and around existing communities and major subdivisions. Tourist villages, motel complexes, and cottage clusters are devices for concentrating recreational activities. Policies of expanding and encouraging the development of existing centres and programmes of clustered recreational development will allow accommodation of a larger tourist demand without having to waste land resources and without unduly constraining the opportunities for industrial and residential development.

In the foregoing paragraphs, we have mentioned a number of specific measures. Whether any one of these is followed or not is unimportant. What are significant are the principles and trade-offs that these measures incorporate. Many single purpose public instruments are available to solve problems of land use regulations. Designation of critical areas, establishment of a coastal zone, identification of areas of growth and passive use, etc. They could even be consolidated in comprehensive land use legislation. Presently the regulation of land use does not pose a major problem. Ontario's St. Lawrence Parks Commission has done a commendable job through park development and by the use of their powers to allow or deny access to the Thousand Island Parkway. It has managed to maintain a fairly uncluttered pattern of development. The official plan of the South Leeds Planning Area may further reinforce these efforts.

The main issues facing the Thousand Island Region are matters of economic and social policies. What is the preferred mix of public and private uses? How much tourism and summer activity should be encouraged and how much of industrial and commercial development? How can the Region best serve the function of the growth pole in Eastern Ontario? These issues need to be resolved prior to establishing of land use regulations. In fact, public initiative and enterprise is as important an ingredient in the optimal allocation of land resources as the drafting of another set of zoning by-laws and land use regulations.

Establishing an optimum level of tourism and recreation in the Region

It is not likely that one could establish whether today's level of tourist and recreation activities are at, or near, a saturation point in the Thousand Island Region. There will be a wide variety of viewpoints about this because tourism affects people of the Region in different ways. But with the expectations of some tourist firm operators of a steady ten percent per year growth rate in visitors it is wise to consider whether future levels of visitors may generate unpleasant conditions for most permanent residents. For at this rate of growth the present annual level of about 1.5 million visitors would double in less than a decade.

Will three million annual visitors constitute a burden on the people and resources of the Thousand Island Region? The simplest and best answer is that it will depend upon the kind of tourist activities and their location. But the outcome need not be left to chance, it is possible to consider the merits of various options for the future right now. Among the future possibilities that would have significantly different impacts are (1) the more-of-the-same option; (2) the steady-state option; and (3) the diversification option.

The costs and benefits of the first option, which is a simple continuation of present trends and conditions, can be perceived and extrapolated from current tourism. This study has shown that the economic return of tourism is low in net terms and that today's number of visitors is already causing congestion of some water and land resources. To double the economic returns means virtually doubling the annual number of visitors. Is it possible that undue congestion mught lead to a deterioration of the very amenity resources that currently attract visitors?

The second, the steady-state, option should not be construed as a no-growth option. Rather this option might promote maintenance of the present prosperous level of tourism as well as conserving amenity resources to ensure long term stability in the number of visitors. It might also promote tourist and recreation activities that encourage longer stays by visitors so that while numbers do not grow there will still be a growth in income from tourism.

The third option would encourage a greater diversity in the kinds of tourist and recreation activities combined with a broader geographic distribution. This option would allow greater numbers to be accommodated while avoiding undue congestion and generating more economic benefits than under the first option. The diversification might be accomplished in a variety of ways from the establishment of a large-scale cultural festival, to the promotion of amenity resources to attract year-round non-tourist employment opportunities, to the development of tourist packages which combine the attributes of inland and shoreline recreation resources.

Developing a viable planning process encompassing both local and Regional interests

There is an unfortunate split in the planning process for development in the Thousand Island Region. The prime development decisions are made by senior governments or their agencies but the burdens of these decisions on land use often fall upon local planning institutions. This engenders two sorts of difficulties. The first is the disparity in responsibility with senior governments being responsible for such decisions as the expansion of a park or construction of a parkway but not responsible for planning the side effects on surrounding areas. The second difficulty lies in the meagre planning capabilities of most municipalities in the Region.

Local planning is a complex and expensive activity and the smaller the community the more difficult it is for them to marshall the technical and financial resources to undertake planning. Add to this the question of whether the conventional physical planning tools of official plans and zoning by-laws are appropriate in the rural setting of most of the Region's municipalities. At present, only the two cities of the Region, Kingston and Brockville, have professional planning staffs, while the remainder have part-time volunteer planning boards with few administrative officials to implement planning decisions. But as rudimentary as much local planning is, it is within this context that decisions are taken with regard to cottage building and conversion, trailer parks, subdivisions, etc. all of which can affect the form and quality of the Region's development.

If we seek to achieve a more coherent pattern of development for the Thousand Island Region it will be necessary to link up these two planning processes. Senior governments or their agencies should not take unilateral planning decisions that affect the Region as they have been wont to do. Local planning boards should seek to coordinate their planning actions with those of other governments. This suggestion requires restraint by stronger agencies and support for weaker ones. It may indicate the need for a Region-wide planning council to establish objectives for the Region's development, to formulate planning principles to be followed by constituent agencies, and even to provide technical assistance to some.

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